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June 22, 1992

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Attention: Document Control Desk

Subject: Grand Gulf Nuclear Station
Unit 1
Docket No. 50-416
License No. NPF-29
Report of 10CFR50.59 Safety Evaluations - January 1, 1991
through December 31, 1991

GNRO-92/00019

Gentlemen:

In accordance with the requirements of 10CFR50.59(b), Entergy Operations, Inc. is reporting those changes, tests, and experiments under the requirements of 10CFR50.59 for the period of January 1, 1991 through December 31, 1991. A summary of these changes, tests, and experiments is contained in the attachment. If further information is required, please contact this office.

Yours truly,

W. T. Cottle

WTC/GWR/mtc

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cc: (See Next Page)

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SRASN: NPE-91-001

DOC NO: MCP-90-1047-S00-R00

DESCRIPTION OF CHANGE: Provides P.A. system capability to the Contractor/Outage facility. A separate power source was provided for the new P.A.'s. Card readers and door locks are also added by this change.

REASON FOR CHANGE: To enhance communication capabilities and accessibility to areas utilized during outages.

SAFETY EVALUATION: The changes made are to systems that are not governed by the GGNS Technical Specifications. All changes are isolated from and have no effect on any safety related systems. The installations have been evaluated against Seismic II/I requirements and seismic raceway supports were added, if required. All added cabling is BOP and was installed to the separation requirements of Regulatory Guide 1.75. Safety related penetration design was used to ensure continued adequacy of all penetrations.

SRASN: NPE-91-002

DOC NO: MCP-90-1074-S00-R00

DESCRIPTION OF CHANGE: Several vent or drain valves were leaking by their seats to clean radwaste (CRW) drain hubs. These valves were part of the Water Vents and Drains system, the Moisture Separator/Reheater Vents and Drains system or the Extraction Steam system. The valves were replaced and the lines to the CRW were capped to prevent any recurrence of the seat leakage.

REASON FOR CHANGE: To prevent system leakage to the CRW.

SAFETY EVALUATION: These systems are not governed by the GGNS Technical Specifications. These systems serve no safety function and failure of these systems will not compromise any safety related system or prevent reactor shutdown. All piping supports meet ANSI B31.1 code requirements. No effect on the operation or function of any system is produced by this change.

SRASN: NPE-91-003

DOC NO: MCP-89-1121-S00-R00

DESCRIPTION OF CHANGE: The prime computer unit was replaced with a new unit. This change upgraded the power supply to handle the additional load requirements of the new computer.

REASON FOR CHANGE: To provide an adequate power supply for the new computer.

SAFETY EVALUATION: This change does not change the design function of the prime computer system or the function of the power supply. This change will not impact the GGNS Technical Specifications. The system is non-safety related and the power supply is from a BOP UPS panel. Failure of the prime computer or the BOP UPS panel will have no effect on any safety related Class 1E equipment. The transformer added by this change will be supported as Seismic II/I. Separation requirements of Regulatory Guide 1.75 will be maintained.

SRASN: NPE-91-004

DOC NO: MCP-90-1010-S00-R00

DESCRIPTION OF CHANGE: Personnel barriers were installed at various locations in containment.

REASON FOR CHANGE: To prevent unauthorized entry into high radiation areas.

SAFETY EVALUATION: The changes to be implemented are not governed by the GGNS Technical Specifications. The barriers are designed as Seismic Category II/I and therefore will not affect any safety related components in the area. The installation of the barriers will not adversely affect the containment structure since the design utilizes lightweight members allowing the structure to maintain its original flexibility. The barriers are made of expanded metal mesh and will not cause any major flow obstructions and will not require any new isotherms to be generated for the hydrogen control program.

SRASN: NPE-91-005

DOC NO: MCP-89-1086-S00-R00

DESCRIPTION OF CHANGE: Key-locked handswitches were installed into the low suction pressure trip circuit of the condensate pumps. The handswitches will allow bypassing of the low suction pressure signal when the suction strainers are not installed.

REASON FOR CHANGE: The change will prevent inadvertent tripping of a condensate pump due to failure of the pressure switch. There is no requirement for the pressure switches when the suction strainers are not installed.

SAFETY EVALUATION: The switches are not used for any technical specification basis nor are they used to verify any technical specification. These switches are not required to effect or support the safe shutdown of the reactor or to perform in the operation of reactor safety features. No credit for these switches is taken in any accident analysis as described in the UFSAR.

SRASN: NPE-91-006

DOC NO: MCP-89-1070-S00-R00

DESCRIPTION OF CHANGE: This change added variable time delays of 4-60 seconds for the high leakage flow annunciator for the Standby Service Water (SSW) Loops. Interlocks were also added to the annunciator circuits to prevent spurious alarms when the associated SSW pumps are not running.

REASON FOR CHANGE: To prevent spurious alarms which presently result from SSW startup flowrate transients.

SAFETY EVALUATION: Addition of the time delay will prevent spurious alarms during system startup and will not prevent the alarm function if a leak occurs. Leak detection is only needed when the system is in operation. Therefore, the addition of the pump run interlock will not prevent the alarm from performing its required leak alarm function. The annunciator and BOP computer point circuitry is electrically isolated from the SSW system logic and control systems. SSW system initiation and control is not dependent on the associated high leakage flow rate annunciator and BOP computer point circuitry. The added equipment is of the same quality as the associated electrical circuitry and have been evaluated with respect to the electrical loading of the power supplies required for their operation.

SRASN: NPE-91-007

DOC NO: CN-90-0182-S00-R00

DESCRIPTION OF CHANGE: The redundant stop check valves (configured as vacuum breakers) used on the supply and return lines to the spent fuel pool were designed to provide siphon protection. These valves were replaced with redundant, self clearing passive anti-siphon vents.

REASON FOR CHANGE: The old stop check valves were identified as a high maintenance item.

SAFETY EVALUATION: GGNS Technical Specifications do not specifically address siphon protection for the spent fuel pool but does establish minimum pool level. All lines to the spent fuel pool that terminate below the minimum level of 202'5 1/4" (as defined in section 5.6.2 of the Technical Specifications) require anti-siphon protection. The passive vent system provides the required protection but does not rely on active component and thus increases the reliability of the system. This is a change only in the method of providing siphon protection and does not change the design function of the spent fuel pool siphon protection. All of the limits for stored fuel shielding, cooling, and reactivity control as described in the FSAR (subsection 15.7.5) are unaffected by this change. All applicable design and installation criteria as well as operational requirements were maintained. These vents are located below the normal water level and would only be uncovered during a pool draindown.

SRASN: NPE-91-008

DOC NO: MCP-90-1021-S00-R00

DESCRIPTION OF CHANGE: The setpoints of the Fire Water Supply system pumps were changed to account for the uncertainty inherent in the pressure switches used to start the pumps.

REASON FOR CHANGE: The change ensures the proper start sequence of the pumps. The pumps start on low water pressure and the start sequence could be affected by the inherent uncertainty of the pump start instrumentation.

SAFETY EVALUATION: The jockey pump is designed to keep the system full and pressurized during normal conditions. The setpoint was increased by 5 psi. This has the effect of raising the maximum shutoff pressure of the jockey pump and the normal static pressure of the system by 5 psi. The new maximum normal static pressure is 174 psig. All piping and system components have been determined to be acceptable for a normal static pressure of 174 psig. All piping system components have been reviewed to ensure that no adverse effects on the structural integrity of the system will result. The change in operating pressure will not affect the design requirements for the system.

The setpoint to start the motor driven pump was changed from 125 psig to 129 psig. The two diesel driven pumps were changed from 125 psig to 123 psig and 117 psig. The time delays of the two diesel driven pumps were changed from 15/30 seconds to 5 seconds. The changes will not prevent any system or component from performing its safety function under any conditions. There is no reduction in the fire fighting capacity of the system.

SRASN: NPE-91-009

DOC NO: MCP-89-1096-S00-R00

DESCRIPTION OF CHANGE: This change replaced piping damaged due to water hammer in the radwaste system. A new high point vent was also added to aid in hydrostatic testing. The change also provided instructions to determine the acceptability of a dent in a pipe spool.

REASON FOR CHANGE: To repair damage caused by water hammer.

SAFETY EVALUATION: No operation or functional changes were made to the system. The piping changes are designed in accordance with all applicable standards.

SRASN: NPE-91-010

DOC NO: MCP-90-1084-S00-R00

DESCRIPTION OF CHANGE: Valve and heat trace setpoint modifications were made to the offgas pretreatment panel. One valve was replaced with a larger valve and a new valve was added. The setpoint for associated heat tracing was lowered.

REASON FOR CHANGE: To increase reliability of the offgas pretreatment sample low flow alarm by preventing water build-up in the sample panel.

SAFETY EVALUATION: There are no safety related pressure boundaries affected by the modification. The change does not affect the performance of any system, structure, or component relied upon to mitigate the consequences of any transient or accident. The equipment modifications are not governed by the technical specifications nor do they interact with existing equipment in such a way as to affect compliance with any technical specification.

SRASN: NPE-91-011

DOC NO: MCP-91-1006-S00-R00

DESCRIPTION OF CHANGE: This change replaces certain plant public address (P.A.) system jack boxes with P.A. handset stations and speakers. Speakers were added to certain existing stations.

REASON FOR CHANGE: To improve plant communications.

SAFETY EVALUATION: The system is not included in the technical specifications nor is it connected electrically or mechanically to any system important to safety as described in the UFSAR. The added speakers will improve communications within the affected areas without changing the function of the system.

SRASN: NPE-91-012

DOC NO: MCP-89-1022-S00-R00

DESCRIPTION OF CHANGE: The chlorine analyzer on the Plant Service Water system was abandoned in place and was no longer being used. This change revised design drawings and instructions for abandoning this instrument in place.

REASON FOR CHANGE: To update drawings and instructions to reflect actual plant conditions.

SAFETY EVALUATION: This instrument and its indication is not addressed by the Technical Specifications. The analyzer was used when chlorine was added to the Plant Service Water (PSW) system and since chlorine is not normally added to PSW, the analyzer serves no useful function.

SRASN: NPE-91-013

DOC NO: MCP-91-1013-S00-R01

DESCRIPTION OF CHANGE: This change installed a local handswitch for each radial well pump to provide the option of enabling or disabling the telemetry portion of the start/stop control for each pump. Additional contacts were added to the local Start/Stop handswitch for each pump on wells 1, 3 and 5 to prevent a control room alarm from coming in every time a pump is stopped locally.

REASON FOR CHANGE: Failure of the telemetry system could cause erratic starting and stopping of the pumps and prevent local operation of these pumps.

SAFETY EVALUATION: The radial well system has no safety related function as defined in the UFSAR. Failure of the system will not compromise any safety related system or component and will not prevent safe reactor shutdown. Electrical separation for the portions of the system modified were done in accordance with the requirements of Regulatory Guide 1.75 to ensure that the ability of safety related systems to perform their intended functions will be maintained.

SRASN: NFE-91-014

DOC NO: MCP-90-1108-S00-R00

DESCRIPTION OF CHANGE: Three parallel exhaust mufflers (in lieu of the original single muffler) were installed on the instrument air compressor dryers. Air metering valves and flow rate indication were added for the existing in-line dew point monitors.

REASON FOR CHANGE: The instrument air dew point had degraded on two separate occasions prior to and during RF04. This change was made to preclude recurrence.

SAFETY EVALUATION: The GGNS technical specifications do not address dew point requirements, the configuration of the instrument air header and branch line piping, or any other portion of the system being affected by this modification. Failure of the modified muffler by breaking will not affect the ability of the dryer to deliver dry air. This change will allow the maintenance of the relative humidity to less than 2% in the instrument air system. This will enhance the reliability of essential components and subsystems and establish an air quality that is commensurate with the design intent of safety related components.

SRASN: NPE-91-015

DOC NO: DCP-87-3511

DESCRIPTION OF CHANGE: Various changes were made to the control room panels as a result of the Detailed Control Room Design Review (DCRDR). This change involves only a labeling and the addition of demarcation lines to separate controls.

REASON FOR CHANGE: To incorporate human factors considerations into the control room environment.

SAFETY EVALUATION: The changes made involved labeling and demarcation changes only and do not effect system operations. The panel seismic and combustible loads are not affected by these modifications. Fire protection criteria for these panels are not affected. The changes will reduce the probability of human error while operating plant equipment.

SRASN: NPE-91-016

DOC NO: DCP-86-0121-S00-R00

DESCRIPTION OF CHANGE: Three temporary air conditioning units were installed in the computer room and the installation of two permanent units was completed.

REASON FOR CHANGE: To provide an environment conducive to computer operation.

SAFETY EVALUATION: The units are non-safety related supplied by non-Class 1E power and the piping is designed in accordance with the requirements of the appropriate standards. No penetrations associated with this change breach any exterior walls or the control room envelope. The addition of the three air conditioning units was reviewed against the potential hazards required to be considered in design, including fire, flooding, water jet impingement, missile generation and seismic II/I concerns. These air conditioning units serve no safety function and their failure will not compromise the safety function of safety related systems or prevent a safe reactor shutdown.

SRASN: NPE-91-017

DOC NO: DCP-83-0527-S00-R00

DESCRIPTION OF CHANGE: The line size of various sample sink drains was increased from 1/2" to 1". The sinks are located in the Turbine Building, Auxiliary Building and Circulating Water Pump House.

REASON FOR CHANGE: To allow proper drainage when samples are being taken.

SAFETY EVALUATION: No operational or functional changes will result as a consequence of this change. The modifications are performed in accordance with applicable codes and design standards/specifications. All of the drain lines modified by this change are non-safety related and are not interconnected with any safety related systems.

SRASN: NPE-91-019

DOC NO: DCP-86-0035-S00-R00

DESCRIPTION OF CHANGE: A drain funnel was installed under the fuel pool drain tank vent in order to route any liquid effluent to the floor drains.

REASON FOR CHANGE: When the drain tank level was high, air entrained in the tank would cause some water to be expelled onto the floor. This change was effected to prevent the spread of contamination to the floor area.

SAFETY EVALUATION: No operational or functional change was made to the fuel pool cooling and cleanup system. All piping and pipe support designs meet ANSI B31.1 code requirements and are qualified as seismic category II/I. All additions made by this change are non-safety related.

SKASN: NPE-91-020

DOC NO: DCP-90-0084-S01-RL9

DESCRIPTION OF CHANGE: Various safety handrails and safety cables were installed along the perimeter of the Containment Building fuel pools.

REASON FOR CHANGE: To prevent personnel performing refueling related activities from falling into the pools.

SAFETY EVALUATION: All handrails and safety cable designs are in accordance with applicable codes. The structures to which the personnel safety devices were attached are adequate or were reinforced to be adequate for all design load cases. The change does not impair the function of any safety related systems or components. There is no impact on the operation of any plant equipment as a result of this change.

SRASN: NFE-91-021

DOC NO: DCP-85-0129-S00-R01

DESCRIPTION OF CHANGE: The water supply for the Circulating Water (CW) pump motor bearing coolers and bearings previously consisted of two sources: the Plant Service Water (PSW) system and the Domestic Water (DW) system. DCP-85-0129-S00-R01 replaced the supply of water from the PSW system with a supply of water from the Make-up Water Treatment (MWT) system. This design change package also included the capping of the existing piping from the PSW system.

REASON FOR CHANGE: The change provides a clean, reliable backup water supply.

SAFETY EVALUATION: The DW, CW, and PSW systems are not addressed in, or governed by, the technical specifications. System valves forming a part of containment boundary are not affected. The design change does not affect any safety related functions and the modification is constructed in accordance with applicable codes and standards.

SRASN: NPE-91-022

DOC NO: DCP-89-0004-S00-R00

DESCRIPTION OF CHANGE: The two 15,000 gpd Unit 1 and two 15,000 gpd construction sewage treatment plants were replaced with a new 100,000 gpd site sewage treatment plant.

The new sewage plant treats the sewage from the plant, ESC, and contractor facilities.

REASON FOR CHANGE: The change increases the sewage treatment capability of GGNS.

SAFETY EVALUATION: The change does not affect the technical specifications because there are no technical specifications governing the use of the sewage treatment facility. The change also does not affect any safety-related equipment because there are no plant components or equipment dependent upon the operation of the new sewage treatment plant. The new sewage plant utilizes the same treatment process that was previously used, using similar equipment to perform the same functions. The use of chlorine at this new sewage plant is in compliance with the requirements of Regulatory Guide 1.95.

SRASN: NPE-91-023

DOC NO: DCP-83-4095-S03-R00

DESCRIPTION OF CHANGE: This change provided for the installation of an alkalization unit for the generator primary water system.

REASON FOR CHANGE: To ensure reliability and availability of the generator by assuring that the primary water system operates at a pH of 8.0 to 8.5.

SAFETY EVALUATION: The alkalization unit will reduce corrosion and the formation of conductive deposits in the generator cooling system. The unit installation including power supply, controls, and instrumentation will not have any effect on safety previously evaluated in the UFSAR and will not create any possibility for an accident or malfunction of a different type than previously evaluated in the UFSAR. The affected generator cooling and TECW systems are not addressed in the technical specifications.

SRASN: NPE-91-024

DOC NO: CR-NPE-91-0008

DESCRIPTION OF CHANGE: Three administrative changes to Grand Gulf design engineering organization are being made to the UFSAR:
(1) Change of title of department head for Design Engineering at Grand Gulf Nuclear Station from Director, Nuclear Plant Engineering to Director, Design Engineering - OGNS;
(2) Clarification of functional areas for which Vice President, Engineering is responsible; and (3) Change in description of Quality Engineering function from group to single individual.

REASON FOR CHANGE: To reflect new consolidated engineering organization and to more correctly indicate scope of job functions.

SAFETY EVALUATION: (1) The change is a purely administrative change and involves a job title change only; responsibilities of the position are not altered. (2) The functional area being removed from responsibility of Vice President, Engineering (UFSAR 13.1.1.2.1.3) is assigned to the Vice President, Operations Support (UFSAR Section 13.1.1.2.1.4). Therefore, no responsibility or commitment is being deleted. (3) The change of Quality Engineering from a group to a single individual was accomplished primarily by realignment of responsibility for certain production related functions, such as procedure development, from Quality Engineering to the groups responsible for the work covered by the procedures. The Quality Engineer retains review responsibility for all Nuclear Plant Engineering (NPE) procedures; thus ensuring against any reduction of commitments. There is no change in the existing facility or its operation.

SRASN: NPE-91-025

DOC NO: CN-91-0052

DESCRIPTION OF CHANGE: This change consists of three new personnel barriers installed in the Radwaste Building. Two barriers consist of a structural steel frame and/or door with expanded metal. A security lock is provided on one side of the door. One other barrier consists of miscellaneous 1/4" thick steel plates.

REASON FOR CHANGE: New personnel barriers are required to prevent unauthorized personnel entry into very high radiation areas.

SAFETY EVALUATION: The barriers are designed and installed as non-safety related, BOP. The barriers preclude creation of II/I hazards on the basis of the locations at which they are installed. The barriers do not create any major ventilation flow obstructions. Available fire protection measures are not affected by installation of the barriers, since they are constructed of mesh and allow smoke and water to pass through. The barriers do not affect the seismic design of the radwaste building since small flexible members utilized for their construction does not allow a transfer of loading between floors other than previously analyzed. The design of the barriers eliminates fire concerns by utilizing non-combustible materials. The barriers are used for personnel safety only, and are not considered in a basis of any technical specification, therefore the original margin of safety will not be reduced.

SRASN: NPE-91-026

DOC NO: MNCR-91-0038

DESCRIPTION OF CHANGE: Valves N23F007C, F008C and F008C have experienced a steam leak through the seats. The valves are located in drain lines from Feedwater Heaters B0142EC and B004C and are piped to the control rod withdrawal drainage system. The valves could not be isolated with the system in service, therefore, an on-line leak repair effort was made to temporarily control the steam leak until the valves could be permanently repaired. It was determined that these valves were still leaking after injecting the leak repair compound. This line is being capped off to stop the leakage.

REASON FOR CHANGE: This line is being capped off to prevent the leakage through the isolation valve seats from entering into the drainage system.

SAFETY EVALUATION: The piping meets ANSI B31.1 code requirements. The piping is supported for dead weight and thermal loads only since it is installed in the Turbine Building which is a non-seismic building. This system serves no safety function. Failure of this system will not compromise any safety related system or prevent reactor shutdown. The operation or function of this system, as described in the FSAR, is not affected by the change. No accident precursors evaluated in the FSAR are affected by this change. Adding the cap to this system will not change the function or operation as defined by the bases of any technical specification, therefore, the margin of safety is not reduced.

SRASN: NPE-91-027

DOC NO: MCP-90-1108

DESCRIPTION OF CHANGE: This change installed three exhaust muffler arrangements on Unit 1 and Unit 2 instrument air drying towers. This change also installed a metering valve and flow indicator on the discharge of both Unit 1 and Unit 2 dew point meters.

REASON FOR CHANGE: The mufflers were installed to reduce regeneration back-pressure for maintaining proper dew point. The subject metering valves and flow indicators were installed for proper operation of the dew point meters.

SAFETY EVALUATION: Loss of instrument air as an initiating event is evaluated in UF3AR Section 15.2.10, which assumes a major pipe break, and a mechanical or electrical failure of the instrument air supply and the backup service air source. This transient disturbance is evaluated as an incident of moderate frequency. During this transient, all equipment using instrument air is designed to fail to a position that is consistent with the safe shutdown of the plant.

This change provides for a more rapid depressurization of the regenerating dryer. A rapid depressurization is essential to proper dryer operation. This change provides flow instrumentation and valves to ensure the accuracy of the existing dew point monitors. These modifications will enhance the ability of the dryer to provide dry air and will better enable Plant Staff to monitor instrument air dew point.

This change helps to maintain a high level of air quality for air servicing safety related components. More reliable air drying equipment and improved monitoring of dew point support the instrument air evaluation assumption that upon loss of instrument air, all equipment will fail to a position that is consistent with safe shutdown of the plant. Failure of modified mufflers by breaking will not affect the ability of the dryer to deliver dry air. The probability of failure of the mufflers by clogging is reduced by implementation of this change. The probability of a major pipe failure in the instrument air system is decreased by the implementation of this change. By maintaining a relative humidity of less than 2% in the instrument air system, oxidation of iron or steel components in contact with compressed air is arrested thus decreasing the possibility of corrosion weakening pipe walls. Implementation of this change enhances the ability of the instrument air dryers to maintain the required dew point in order to maintain the 2% relative humidity.

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Implementation of this change will augment the ability of the instrument air system to meet the air quality requirements that is commensurate with the design intent of safety related components, and with the UFSAR evaluation assumption that the air quality is sufficient to ensure that the components operate as designed. Therefore, implementation of this change does not reduce the margin of safety as defined in the basis for any technical specification.

SRASN: NPE-91-028

DOC NO: CN-91-0015

DESCRIPTION OF CHANGE: This change made permanent the changes made in a temporary alteration which disconnected the HI-HI RAD trip of the Radwaste Building exhaust filter train fans.

REASON FOR CHANGE: The purpose of this change is to allow the fans to be restarted after the radiation conditions have been assessed and deemed acceptable. The fans must be restarted to establish air flow through the vent to clear the conditions which caused the HI-HI RAD trip.

SAFETY JUSTIFICATION: The accident analyses reported in the UFSAR do not take credit for the high-high radiation trip of the Radwaste Building exhaust filter train fans. Failure of any component, system or structure added or modified by this change will not initiate any evaluated transient or accident. Deletion of the high-high radiation trip of the Radwaste Building exhaust filter train fans will not change the design intent of the system. The high-high radiation trip of the Radwaste Building exhaust filter train fans is not required to support the safe shutdown of the reactor or to perform in the operation of reactor safety features. No credit for this trip is taken in the accident analysis for an offgas or radioactive liquid waste system leak or failure as described in the UFSAR. The area radiation monitors, the operational indicators and annunciators in the control room, which are used in the event of an offgas or radioactive liquid waste system leak or failure as described in the UFSAR are not affected by this change.

The margin of safety as defined in the bases for the technical specifications are not changed by the deletion of this trip. The radiological conditions will still be assessed to ensure compliance with 10CFR20 as described in Technical Specification 3/4.11.2. The bases for this technical specification requirement are not dependent on the Radwaste Building exhaust vent trip.

SRASN: NPE-91-029

DOC NO: CN-90-0181

DESCRIPTION OF CHANGE: This change provides for the installation of a lightning dissipation system on the radial well enclosure buildings.

REASON FOR CHANGE: The new system provides greater protection from lightning strikes than the old system.

SAFETY EVALUATION: The buildings with attached lightning protection are non-seismic, non-category I designed to the same Universal Building Code (UBC) requirements as the Ranney Wells. The buildings do not contain any equipment whose loss or malfunction would create an initiating event as described in the UFSAR. Loss of the Wells has already been postulated and is not required for safe reactor shutdown. The buildings do not house any equipment important to safety and are physically isolated from any equipment important to safety. The margin of safety will not be reduced by the addition of lightning protection to the Enclosure Buildings.

SRASN: NPE-91-030

DOC NO: CN-91-0012

DESCRIPTION OF CHANGE: This change provided instructions to replace portions of the floor tile and wall base molding in the control cabinet area.

REASON FOR CHANGE: Portions of the old floor tile, carpet squares, and wall base molding were damaged and needed to be replaced under the Detailed Control Room Design Review (DCRDR). Since the tile originally specified for this location is no longer available, an alternate is approved for installation.

SAFETY EVALUATION: The alternative floor tile has been tested in accordance with ASTM E-648 and ASTM E-662. Test results show the alternate tile to possess acceptable fire performance characteristics with respect to flame spread and smoke development. The wall base molding has not been subjected to flame spread and smoke development tests; however, it represents an insignificant portion of the combustibles located within this area and is therefore acceptable. The floor is not a fire boundary for this fire zone and is therefore not required to be fire rated. This change does not impact any margin of safety in the technical specification.

SRASN: NPE-91-031

DOC NO: CR-NPE-90-0041

DESCRIPTION OF CHANGE: This change deletes the implied reference to a 12 second analytical stroke time for this HPCS injection valve, E22-F004, in UFSAR Subsection 6.3.2.2.1.

REASON FOR CHANGE: The 12 second analytical opening time for the HPCS injection valve is incorrect. Based on the sequence of events provided in UFSAR Table 6.3-1 for a design bases accident, the HPCS system is signaled to start at 3 seconds and has completed startup at 30 seconds. Therefore, an analytical stroke time for this valve is not specified.

SAFETY EVALUATION: The HPCS injection valve analytical stroke time is unrelated to the probability of occurrence of any accident previously evaluated in the FSAR. The accidents previously evaluated in the UFSAR are based on a HPCS system analytical response time of 27 seconds as indicated in UFSAR Tables 6.3-1 and 6.3-2. The deletion of the incorrect HPCS injection valve analytical stroke time of 12 seconds from Subsection 6.3.2.2.1 will not increase this analytical system response time. None of the references reviewed require an analytical stroke time of 12 seconds for the HPCS injection valve. Therefore, this change has no impact on the UFSAR accident analyses and does not increase the consequences of any accident previously evaluated in the FSAR. This change has no physical impact on any equipment and does not affect any design basis accident analysis. Since this change will not result in any relaxation in the performance requirements of any components or systems or increase the consequences of any accident previously evaluated, it does not reduce the margin of safety as defined in the basis for any technical specification.

SRASN: NPE-91-032

DOC NO: MNCR90-0256

DESCRIPTION OF CHANGE: This change modified the reactor protection system (RPS) logic to one-out-of-two taken twice for the scram discharge instrument volume level instrumentation.

REASON FOR CHANGE: The existing design provided redundant and diverse instrumentation arranged in a one-out-of-two taken twice logic for the entire scram discharge volume and a two-out-of-two logic for each instrument volume. It is desired to have a one-out-of-two taken twice logic for the instrument volume per original General Electric (GE) design.

SAFETY EVALUATION: The Scram Discharge Volume (SDV) level scram is an anticipatory trip which is not assumed in any accident analyses. The GGNS instrumentation arrangement provides redundant and diverse level monitoring of the SDV volume. No single failure of the SDV level instrumentation will initiate an event which would challenge the integrity of the reactor or any Engineered Safety Feature (ESF) system. No single failure of the SDV level instrumentation will allow the undetected buildup of water in the scram discharge volume or affect the ability of the reactor to scram. The SDV level instrumentation does not provide input into any ESF system and will not affect the ability of any ESF system to perform its design function.

The SDV level instrumentation has been evaluated for the effect of a blocked instrument volume drain in conjunction with the single failure of an RPS scram contactor. This event would result in an initial scram of two out of the four control rod groups. However, due to the arrangement of the control rods within the core, half of the scrambled rods would discharge water into the unblocked SDV. This would result in a scram signal from the unblocked SDV which would scram the remaining two rod groups. A trip in the blocked SDV with a single failure will result in an indirect full core scram. An indirect scram under these conditions will meet the GGNS anticipated transient without scram (ATWS) requirements. This instrument configuration does not affect the RPS setpoint requirements as stated in the technical specifications. Therefore, the margin of safety as defined in the bases for any technical specification will remain unchanged.

SRASN: NPE-91-036

DOC NO: DCP-86-0112-S00-R00

DESCRIPTION OF CHANGE: This change upgrades programmable controls hardware in panels G36-P002, Reactor Water Cleanup (RWCU) Filter/Demineralizer, and G46-P002, Fuel Pool Cooling and Cleanup (FPCCU) Filter/Demineralizer.

REASON FOR CHANGE: The old controllers are obsolete and spare parts are not available.

SAFETY EVALUATION: No accident evaluation in the UFSAR or malfunction of equipment important to safety is predicated on a failure of the filter/demineralizer portion of either RWCU or FPCCU. Nor is the RWCU or FPCCU used to mitigate the consequences of an accident. The function and operation of the filter/demineralizer portion of neither RWCU or FPCCU is affected by this change. No margin of safety as defined in the Technical Specification bases is predicated on the operation of the filter/demineralizer portion of either RWCU or FPCCU.

SRASN: NPE-91-037

DOC NO: DCF-87-3508-S00-R00

DESCRIPTION OF CHANGE: This change makes human factors modifications to the H13-P600, P604, P844 and P845 panels by doing the following: 1) Add parameter labels to the H13-P844 area radiation monitors; 2) Add correct scales and labels (Per ES-17 Appendix A) to all H13-P600 and P844 recorders; 3) b. j-P844 D21 Rad Monitor meter zone markings from the glass to the meter face; 4) label process Rad Monitors which provide a trip function; 5) Reword the Off-Gas and Radwaste Bldg and CTMT Vent label to clarify the control function; 6) Place recorder label on H13-P844 for D21-R600C above the recorder; 7) Move functional group labels as appropriate to ensure proper control/labeling relationship; 8) Replace operator aid mimic with panel mimics on H13-P845 and 9) Add instrument ID numbers to labels of those instruments with no identifiers for Panels H13-P600, P604, P844 and P845.

REASON FOR CHANGE: These changes fulfill commitments made in AECM-86/0226 (DCRDR Final Summary Report).

SAFETY EVALUATION: This change does not affect the operation of any associated systems. Seismic qualification, safe shutdown, fire protection and environmental criteria are not affected by the modifications.

This changes does not increase the combustible or seismic loads on the panels. These modifications decrease the probability of human error while operating plant equipment. The modified equipment meets all design requirements and does not change in function or operation.

These change modifications increase the operator margin of safety by reducing the probability of human error.

SRASN: NPE-91-038

DOC NO: DCP-89-0030-S00-R00

DESCRIPTION OF CHANGE: This change modifies the lube water piping to the circulating water pumps to replace the deeper basket strainer. With two single basket strainers installed in parallel lines with individual isolation.

REASON FOR CHANGE: During the switching process of this deeper strainer from one basket to the other, a momentary loss of flow to the circulating water pumps can result. This momentary loss of flow could result in a circulating water pump trip. This change allows the switching process to isolate a basket strainer and service it without interrupting the lube water flow.

SAFETY EVALUATION: The modification provides for two basket strainers in parallel in the circulating water pump lube water supply. The piping and pipe supports designs meet ANSI B31.1 code requirements. The piping is supported to dead weight loads only since it is installed in the circulating water pump house, which is a non-seismic building containing no safety related equipment. The Circulating Water system serves no safety function. Systems analysis has shown that failure of the CW system will not compromise any safety related systems or prevent reactor shutdown. The operation or function of the CW system, as analyzed in the FSAR, is not affected by the addition of the basket strainers. Therefore, this change will not increase the probability of occurrence of an accident previously evaluated in the FSAR.

The proposed changes do not modify any equipment used in mitigating the consequences of an accident as analyzed in the FSAR, nor do they affect any actions taken to mitigate an accident as analyzed in the FSAR.

The addition of the basket strainers to the Circulating Water system will not change the function or operation as defined by the bases of the technical specifications, therefore, the margin of safety is not reduced.

SRASN: NPE-91-039

DOC NO: MCP-89-1097-S00-R0 & R1

DESCRIPTION OF CHANGE: This change routes the discharge from valves P42F215/F213, in the Component Cooling Water (CCW) system to a Chemical Radwaste (CHRW) drain with a new valve installed at a location suitable to ease the venting operation.

REASON FOR CHANGE: The venting of the component cooling water (CCW) discharge and suction headers are performed daily. To perform this venting, valves P42F215 and F213 must be operated. These vent valves are located approximately 20 feet from the floor, thereby requiring a ladder to perform the venting. Additionally, it is necessary to use a hose to direct the water from the venting process to a drain. This change makes the vent operation simpler and easier.

SAFETY EVALUATION: The modifications provide process lines to allow easier venting of the CCW suction and discharge header. The piping and pipe supports designs meet ANSI B31.1 code requirements and are qualified as Seismic Category II/I. The installation is non-safety related and will not affect the safety related portions of this system. For the affected system, only these portions of the system which penetrates the containment or provide system isolation from the Fuel Pool Cooling and Clean-up (FPCCU) system are safety related. Failure of the affected system will not compromise and safety related system or component and will not prevent reactor shutdown.

The operation or function of the affected system, as analyzed in the FSAR, is not affected by the addition of these process lines. Penetration AP-127C will be closed to provide a fire rating equivalent to the barrier through which it is installed. Therefore, this change will not increase the probability of occurrence of an accident previously evaluated in the FSAR.

The proposed changes do not modify any equipment used in mitigating the consequences of an accident as analyzed in the FSAR, nor do they affect any actions taken to mitigate an accident as analyzed in the FSAR.

Technical specifications ensure that fire damage will be limited and minimize the possibility that a single fire would involve more than one fire area prior to detection and extinguishment. Penetration AP-127C will be closed to provide a fire rating equivalent to the floor through which it will be installed. Consequently, the effectiveness of the barrier is not reduced.

The addition of the process lines to the CCW system will not change the function or operation as defined by the bases of the technical specifications; therefore, the margin of safety is not reduced.

SRASN: NPE-91-040

DOC NO: DCP-84-4018-S00-R00

DESCRIPTION OF CHANGE: The existing high pressure process lines of differential pressure transmitters which measure the difference in air pressure between the outside air and the fuel handling area air have no wind deflecting capability. This change replaces the existing Fisher Vent Assemblies, Type Y602-9 with Fisher Vent Assemblies, Type Y602-10.

REASON FOR CHANGE: This new vent comes equipped with a wind deflecting cap.

SAFETY EVALUATION: This change insures that the original design intent of the fuel handling area HVAC system is maintained. No new failure modes are created and the margin of safety as defined in the basis for any technical specification is the same.

SRASN: NFE-91-041

DOC NO: QDR-213-91

DESCRIPTION OF CHANGE: Unit 2 fire protection piping which is incomplete and not connected to the fire protection water system is being removed from the Unit 1 Piping and Instrumentation Drawings (P&IDs) and corresponding UFSAR figures.

REASON FOR CHANGE: This change is being accomplished to provide Unit 1 P&IDs which clearly depict piping and facilities which are connected to the fire protection water system.

SAFETY EVALUATION: This change will revise fire protection P&ID drawings (UFSAR figures) to more clearly depict piping, systems and facilities connected to and supplied from the Unit 1 fire protection water system. This change does not modify any plant fire protection systems or components and does not adversely affect the ability of the fire protection system to confine and extinguish postulated fires. Furthermore, this change does not affect any system or component required to mitigate radiological releases and no new release mechanisms are created. Consequently, 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.

This change removes Unit 2 fire protection systems supplied by the construction water system from the UFSAR figures to improve operator perception of fire protection systems available and/or required for Unit 1. No fire protection system shall be affected and no new accident initiators are being created. Therefore, the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created.

The ability of the fire protection system to confine and extinguish postulated fires will not be adversely affected. As directed in the Bases for Technical Specifications 3/4.6.6 and 3/4.7.2, Standby Gas Treatment and Control Room Emergency Filtration charcoal absorbency will not be adversely affected by this change. Valves within the fire protection system and performing secondary containment isolation functions, as listed in Technical Specification Table 3.6.6.2-1, will not be affected. Additionally, primary containment penetration conductor overcurrent protective device 72-11E-36, as listed in Technical Specification Table 3.8.4.1-1, will not be adversely affected. Therefore, the margin of safety as defined in the basis for any technical specification will not be reduced.

SRASN: NPE-91-042

DOC NO: CR-NPE-91-0069

DESCRIPTION OF CHANGE: Revise wording in UFSAR Section 8.3.2.1.6, Station Batteries and Battery Chargers, General Considerations, concerning the design of the physical connection of the battery chargers and the suitability for use with or without the battery physically connected. The Division I and II battery chargers are designed for use with or without the battery physically connected and the Division III battery charger is physically connected such that operation without the battery is not possible. The UFSAR description is reversed for the different divisions. This change does not affect normal operation of the 125V DC systems.

REASON FOR CHANGE: The UFSAR description of the physical connection between the battery chargers and the batteries is incorrect. This change is to correct the description of the UFSAR to agree with the existing design of the 125V DC systems.

SAFETY EVALUATION: The change described does not affect the normal operation of the battery chargers or the batteries. The design of the battery chargers for use with or without the battery physically connected has no adverse affect on the DC power system. The battery chargers are of sufficient capacity to operate system loads as described in the UFSAR. The physical connection of the battery chargers and batteries is shown on design drawings included in the UFSAR. The battery chargers are Class 1E equipment and are designed and sized in accordance with applicable IEEE standards for battery chargers. The capabilities of the DC system will not be affected by the physical connection of the battery chargers.

SRASN: NPE-91-043

DOC NO: CN-V1-0159

DESCRIPTION OF CHANGE: This safety evaluation was originally prepared for DCP 87/4018, Rev. 1 and reported in AECM-89/0098. It is being revised to delete the discussion on atmospheric demin flush capabilities (in the description of change section) because CN 91/0159 deletes this capability. This capability is not needed. The capability was provided as a convenient way to remove radioactive contamination from the condensate portion of the system. Flushing will seldom be needed and can still be accomplished by temporarily connecting tubing between the capped off demin water line and the plugged tee above the sample cooler.

DCP 87/4018 installs a new atmospheric sampling system in a separate panel totally dedicated to atmospheric sampling. The new panel is being located in the PASS room adjacent to the existing 1P33-P001 panel.

The existing atmospheric grab sample point is designed such that the operator is exposed to approximately 36" of unshielded sample line. These lines are the sample inlet and outlet line between the cask and panel. To reduce operator exposure, the method for taking an atmospheric grab sample is being modified. The existing atmospheric grab sample point will be eliminated. The new atmospheric grab sample point consists of a replaceable septum located behind a removable lead plug in a lead block shield wall. This lead plug is being fitted with a guide tube to allow the operator access to the septum via a long needle and syringe. The sample will be drawn into a lead shielded syringe attached at one end of a two foot mechanical arm. The syringe will be opened and closed by the operator from the opposite end.

Twenty-four hours following the onset of an accident, a drywell and containment atmospheric sample is required to be taken via the PASS (reference AECM-91/0332). Per Environmental Specification 15026-E-100.0, Rev. 4, at the time the first sample is required the drywell sample will be saturated steam at 250°F and 30 psia. The atmospheric sample inlet lines are heat traced to minimize condensation and the loss of particulate sample. However, because the sample is saturated it is likely that some minimal condensation will occur. Any condensation that could occur for whatever reason will collect in the sample panel since the panel is the low point in the system. At present, the system provides no means for removing condensate. A sufficient buildup of condensate would effectively render the system inoperable.

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The new atmospheric sample system design includes a sample cooler, a condensate diversion tee, and condensate collection tank. The sample will be cooled from 250°F to approximately 105°F downstream of the grab sample point. The diversion tee will separate the condensate from the atmospheric sample. The collection tank includes a level switch and local alarm to make the operator aware when the condensate tank should be pumped down. The condensate will be pumped to the suppression pool via the existing liquid system return line. The atmospheric sample return line is presently heat traced to 125°F. This will further reduce the possibility of condensate forming in the atmospheric sampling system.

The sample cooler is being added to reduce the power consumption of the heat tracing on the sample return lines necessary to prevent condensation from occurring. Connections provided by DCP 87/4006 in the component cooling water (CCW) system are available for providing cooling water for the sample cooler.

Heat tracing is presently installed on the drywell and containment sample inlet lines and on the common sample return line. Each line has different temperature requirements. The new atmospheric sample panel and affected sample lines are being heat traced by splicing into the existing heat tracing circuits. The overall heat tracing circuit lengths do not exceed the maximum circuit lengths as specified by the vendor.

Provisions are being provided to purge the sample inlet and outlet lines with instrument air.

NUREG-0737, Item II.B.3, criteria 11a and the clarification of 11a addresses the need for heat tracing and purging of sample lines. The clarification also states that purge velocities should be considered. This DCP finalizes modifications required to the heat tracing system. The heat tracing system has been designed to minimize the loss or distortion of the atmospheric sample to ensure that grab samples are representative. Air purging of the sample lines is accomplished via the instrument air system with a system pressure of approximately 100 psig.

The atmospheric sampling subsystem, the solenoid banks and the liquid pump starter are being removed from the PASS sample panel (1P33-P001) to eliminate the overcrowded condition of the panel and thus better accommodate maintenance activities.

Drip pans are being installed in the bottom of the 1P33-P001 panel to collect and contain any minor system leakage and thus, restrict any possible contamination due to leakage into the panel.

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The in-line instrumentation in the liquid sampling subsystem, conductivity, pH and oxygen monitors, are being replaced with new and improved instrumentation. A hydrogen monitor is also being added to the in-line instrumentation to provide additional sampling capabilities for dissolved gases.

REASON FOR CHANGE: The liquid and atmospheric sampling subsystems of the Post Accident Sample System (PASS) are installed in the PASS grab sample panel (N1P33-P001). Both subsystems require modifications to improve the overall system's ability to meet the requirements of NUREG-0737. This panel, in its present condition, is a significant maintenance issue due to its overcrowded condition and poor ALARA design.

SAFETY EVALUATION: The technical specifications are not affected. PASS is addressed in the administrative controls section of the GGNS Technical Specifications (Section 6.8.3.c). This section requires that the PASS program include training of personnel, procedures for sampling and analysis and provisions for maintenance. This DCP provides enhancements to the PASS system in order to better fulfill its design requirements as dictated by the GGNS Technical Specifications, the operating license and as committed to in the UFSAR.

The implementation of this DCP will not increase the probability or consequences of an evaluated accident/malfunction. PASS has been designed in accordance with the requirements of the GGNS operating license, the technical specifications and as committed to in the UFSAR. This DCP provides enhancements to PASS which will enable the system to better perform its design functions. The design has considered and incorporated those pertinent design features which will prevent the failure of PASS from affecting systems required for safe shutdown of the plant following an accident. The PASS design has also incorporated design features for ALARA considerations and for meeting the personnel exposure guidelines of NUREG-0737.

The implementation of this DCP will not create the possibility of an accident/malfunction of a different type than any already evaluated in the UFSAR. The design has been evaluated and it was determined that no new failure modes were introduced.

SRASN: NPE-91-044

DOC NO: CN-91-0182

DESCRIPTION OF CHANGE: The outdated Westronics M1E analog recorder E31R608 will be replaced with a state of the art Westronics series 3200 digital recorder and the setpoint of E31R608 point 21 (E31N015D) will be raised. The outdated Westronics M5E analog recorder E31R611 will be replaced with a state of the art Westronics series 2400 digital recorder. The 10 amp fuse in the power circuit of each recorder will be replaced with two 3 amp fuses in series. This will adequately isolate the non-Q recorders from Class 1E power. This DCP, via CN-91/0182, will also relabel annunciator window 1H13-P680-11A, insert 1-4, for annunciator 1E31-TAH-L616D, to read "RWCU Heat Exchanger Valve Nest Area".

REASON FOR CHANGE: Annunciator E31-TAH-L612B (Drywell Ambient Temp High) stays in alarm because thermocouple E31-TE-N015D is operating at the 145°F setpoint. This constant alarm condition is masking the status of seven other drywell thermocouples which are associated with the same contact output of the recorder E31-TJRS-R608. The setpoint of E31-TE-N015D could be raised if the recorder had a spare contact output. E31R608, however, is a Westronics M1E recorder which has only 6 contact outputs and none are spare.

Annunciator E31-TAH-L620B (RWCU Equipment Area Differential Temp High) is being activated when a high delta T condition (31°F difference between E31N035A and E31N036A) does not exist. Raising the setpoint would prevent this, but the problem is caused by the large deadband of the obsolete and unreliable Westronics M5E recorder E31R611.

In addition to the above described problems, an annunciator engraving change has been identified. Annunciator 1E31-TAH-L616D and the associated instrumentation monitor the temperature in the RWCU heat exchanger valve nest area and not the valve nest room. Safety Evaluation CFMISCO090R00 was written to evaluate the changes to be made to the UFSAR. The temperature instrumentation being located in the RWCU heat exchanger valve nest area and not in the RWCU valve nest room was part of this evaluation.

SAFETY EVALUATION: Temperature recorder E31R608 and delta T recorder E31R611 monitor various areas of the plant for leak detection purposes. Each recorder has six contact outputs which power control room annunciators when a setpoint is exceeded. This alerts the operators to potential steam leaks. These recorders are non-safety related, however and perform no active safety related function. They are also not required for Regulatory Guide 1.97 indication and no credit is taken in the UFSAR for operator actions based on information taken from the recorders or their annunciators. The existing recorders are connected to Class 1E power. The new recorders will be adequately isolated from the

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Class 1E bus. Both recorders are fed from the same Class 1E bus. The load on this bus is not increased because the combined load of the new recorders (155 VA) is less than the combined load of the old recorders (200 VA). The seismic qualification of the safety related panel in which the recorders are mounted will be maintained. No panel modification will be required.

The changes of this DCP will not compromise any existing safety related system, structure or component nor will they prevent safe reactor shutdown. No evaluated accident is predicated by a failure of the affected recorders. This design change will be an improvement in terms of reliability and monitoring capability. The changes of this DCP will not compromise any existing safety related system, structure or component. The failure of the recorders will not initiate any evaluated transient or accident. The E31 (Leak Detection) system operation and function will not change. The recorders are not required to mitigate the consequences of any evaluated transient or accident. No new interfaces are created and no new failure modes are introduced. This change will therefore not introduce an unreviewed safety question. The recorders are not currently addressed in the tech spec and this change will not require that they be added to the technical specification.

SRASN: NPE-91-045

DOC NO: GGNS-E-100.0, Rev. 5

DESCRIPTION OF CHANGE: This is an update (change) to the Environmental Parameters for Equipment Qualification for various safety-related structures under normal operation and accident conditions. Such structures include the drywell, containment, auxiliary building, control building, diesel building and standby service water pump house. These environmental parameter changes update Bechtel Specification 15026-E-100.0, Rev. 4, to Grand Gulf Standard GGNS-E-100.0, Rev. 5.

Updating 15026-E-100.0 included performing the following objectives:

1. Review the current environmental parameters to verify the appropriateness and accuracy of identified values.
2. Review the source reference documents for identifying any impact to environmental parameters.
3. Prepare and issue an engineering standard on environmental parameters for all 10CFR50.49 environmentally qualified electrical equipment.

The FSAR environmental parameters section for equipment qualification will also be revised as a consequence of updating the E-100.0 standard to current plant specific data.

REASON FOR CHANGE: This update (change) is prepared in support of resolving inconsistencies regarding detection and isolation of leaks in Reactor Water Cleanup (RWCU) piping:

1. The existing RWCU isolation circuit contains no room temperature or delta temperature isolation signals for rooms normally having RWCU piping with water at temperatures of less than 120°F. The requirement for these signals was deleted from technical specifications in 1984. However, the mass and energy blowdown calculations used in the FSAR analyses for these rooms are based on RWCU isolation occurring within 50 seconds using the high room temperature and delta temperature (except 1A443) but no automatic RWCU isolation. Without the high temperature trips, RWCU isolation will occur after 80 seconds using the delta flow trip instrumentation.
2. Although all rooms containing RWCU equipment for which failures must be postulated were originally intended to be continuously monitored via temperature instrumentation, the RWCU valve nest room 1A443 has no temperature monitoring instruments. During initial construction, the thermocouples intended for this room were inadvertently installed in the RWCU heat exchanger room (apparently due to the physical similarities of these rooms).

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A QDR identified that Bechtel Specification 15026-E-100.0 must be revised for new accident temperature profiles in the applicable areas. Revising environmental parameters in GGNS-E-100.0 also resulted in required changes to the equipment qualification packages and Engineering Standard ES-21.

QDR 237-89 required a change to the FSAR for pressure and temperature curves (NPEFSAR 89/0042 and CFRMISC0090R00). The GGNS-E-100.0 update required a change for RWCU room temperature curve sets and parameters. The pressure response curves for the GGNS-E-100.0 update do not change because the related RWCU pressure curves are bounded by enveloping containment pressure curves. From Attachment 1 of QDR 237-89, the affected design margins are the accident temperature profiles used for equipment in several of the compartments adjacent to the postulated RWCU line break areas (e.g., rooms 1A419 and 1A447). A review of the environmental qualification records for the equipment in these rooms indicates that there is no environmentally qualified equipment in room 1A419 and that all of the environmentally qualified components in room 1A447 (e.g., the safety related Limitorque valve actuators, instrumentation, hydrogen igniters, and cable) are qualified for the higher temperatures resulting from this postulated event.

This revision removes the FSAR as a primary reference for environmental parameters in GGNS-E-100.0 because this engineering standard is a document that updates the Environmental Qualification of Equipment section in the FSAR.

This revision updates and verifies the drywell, containment (excluding drywell) and auxiliary building environmental total integrated doses and dose rates to be Grand Gulf/BWR-6 specific for normal and accident conditions.

SAFETY EVALUATION: This Environmental Parameter Design update changes environmental parameters and the Total Integrated Dose (TID) for the drywell.

This revision also updates and removes the FSAR as a reference for such environmental parameters as temperature, pressure and relative humidity for normal environments. The revised parameters were compared to Technical Specification Table 3.7.8-1 and none of the changed GGNS-E-100.0, Rev. 5 values exceeded Table 3.7.8-1 values. A preliminary review of environmentally qualified equipment affected by the change in environmental parameters concluded that no effect on qualified life will result.

SRASN: NPE-91-046

DOC NO: GGNS-M-489.6, Rev. 0

DESCRIPTION OF CHANGE: This safety evaluation is performed as a result of the initial issue of standard GGNS-M-489.6 and the referenced UFSAR change. The standard provides requirements for the performance of reactor vessel material surveillance testing and adjustment of the pressure/temperature curve operating limits for GGNS. The pressure/temperature curve operating limits provide protection against nonductile failure of the reactor pressure vessel. The UFSAR change identifies the status of the reactor vessel materials surveillance program based on the methods implemented by the standard. Implementation of the standard and the UFSAR change does not physically change the plant.

REASON FOR CHANGE: The standard was developed to implement the requirements for prediction of reactor vessel material toughness properties and development of pressure/temperature limit curves. Generic Letter 88-11 required the implementation of Regulatory Guide 1.99, Rev. 2. Section 5.3.1.6.5 of the UFSAR required verification of the fluence to thermal power output relationship. The results of implementation of the generic letter and the determination of the revised end-of-life neutron fluence are incorporated in the standard. The UFSAR change is required for consistency with the standard.

SAFETY EVALUATION: The standard implements the requirements for prediction of reactor vessel material toughness properties and development of pressure/temperature limit curves as mandated by NRC Generic Letter 88-11, 10CFR50, Appendices G and H, and Regulatory Guide 1.99, Rev. 2. The standard does not physically change the plant. Also, the standard includes the results of revised neutron fluence predictions. The revised fluence predictions are based on data from dosimetry which was removed from the reactor vessel after the first cycle of operation.

The results of the Regulatory Guide 1.99, Rev. 2 calculation methods and the revised fluence predictions are included in Amendment #75 to GGNS Technical Specifications. Implementation of the standard does not require a change to Technical Specifications. The pressure/temperature curves and the supporting information in the UFSAR are based on the calculation methods of Regulatory Guide 1.99, Rev. 1 and the initial fluence predictions. Therefore, a change to the UFSAR is required.

The revised fluence values are bounded by other neutron flux values that are used to assess environmental effects of neutron radiation. The requirements of the standard are in accordance with NRC methods. The standard provides assurance that fracture safe pressure/temperature limits are established for the GGNS reactor vessel as required by NRC Generic Letter 88-11, 10CFR50, Appendices G and H, and Regulatory Guide 1.99, Rev. 2. No unreviewed safety question exists.

TRAN: NPE-91-047

DOC NO: GGNS-MS-25., Rev. 6

DESCRIPTION OF CHANGE: Mechanical Standard MS-25, Rev. 6, Appendix J contains the values for Maximum Expected Differential Pressure (MEDP) for various safety-related valves which were used as inputs into calculations for required valve thrust calculations. In some cases, these MEDP values differ from MEDP values listed in the UFSAR. These differences are summarized as follows:

Valve	Function	UFSAR MEDP	NPE Calculated MEDP
B33-F023A/B	Recirc Pump Suction	50 psid	34 psid
B33-F067A/B	Recirc Pump Disch	400 psid	34 psid
E22-F004	HPCS Injection	1575 psid	1441 psid
E51-F010	CS1 Tank Isol Vlv	75 psid	38 psid
E51-F013	RCIC Pump Discharge	1400 psid	1391 psid
E51-F019	Min Flow Bypass	1437 psid	1396 psid
E51-F022	Test Return Valve	1412 psid	1395 psid
E51-F031	Supp Pool Suction	75 psid	39 psid
E51-F045	Steam Supply Valve	1177 psid	1080 psid (close)
E51-F046	Clg Loop Shutoff	1408 psid	1396 psid
E51-F059	Test Return Valve	1412 psid	1395 psid
E51-F063	RHR/RCIC Steam Supp	1177 psid	1080 psid
E51-F064	RHR/RCIC Steam Supp	1177 psid	1080 psid

REASON FOR CHANGE: NRC Generic Letter 89-10 (Safety-Related Motor-Operated Valve Testing and Surveillance) discusses the NRC assessments of the reliability of all safety-related MOVs based on extrapolations of then currently available results of testing performed in response to IEB 85-03. As a result of these assessments, the NRC determined that failure of safety-related and "position changeable" valves would occur much more often than had previously been estimated. GL 89-10 therefore provided a number of recommended actions for licensees to perform for improving the reliability of the applicable MOVs. Due to increases in the conservatism in the methodology for calculating required valve thrust values (notably the requirement for the use of a valve factor of .5 rather than .3 for gate valves), a more realistic MEDP value must be used rather than the original bounding (i.e., conservative) valve MEDPs as stated in the original design specifications and/or UFSAR. The MEDP values were determined by NPE calculations for compliance with the requirements of NRC Generic Letter 89-10 (Safety-Related Motor-Operated Valve Testing and Surveillance). These calculations evaluated each MOV on a case-by-case basis for accident or operator mispositioning scenarios identified as "worst-case" by engineering review.

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SAFETY EVALUATION: Use of the MEDP values contained in MS-25, Rev. 6, Appendix J that differ from the values identified in the UFSAR will have no adverse effect on plant safety. The MEDP values in MS-25, Rev. 6, Appendix J are all based upon conservative individual calculations and therefore represent conservative bounding values.

SRASN: NPE-91-048

DOC NO: QDR-0336-90

DESCRIPTION OF CHANGE: Revise UFSAR Tables 9.3-3 and 11.5-3 to clarify the purpose of radiation monitoring and sampling provisions and make an editorial change to UFSAR Section 11.1-3 to clarify that condensate storage supplies water to the condensate system.

REASON FOR CHANGE: QDR 0336-90 was written to document discrepancies in UFSAR Table 9.3-3 and the actual plant conditions. The UFSAR indicates that there is tritium monitoring instrumentation for the SSW and PSW systems. This instrumentation does not exist. The UFSAR also specifies radiation monitoring instrumentation for the Fuel Pool Cooling and Cleanup System which does not exist. An evaluation was performed to ensure the acceptability of the plant conditions with respect to the design bases for radiation monitoring and sampling provisions. This evaluation is documented in Engineering Report GGNS-91/0018. During this evaluation other discrepancies were identified in UFSAR Tables 9.3-3 and 11.5-3 and an editorial change required in Section 11.1-3. These changes ensure the information provided in UFSAR Tables 9.3-3 and 11.5-3 conform with present station procedures, design and practices which meet current licensing and regulatory requirements.

SAFETY EVALUATION: This QDR identifies discrepancies in the UFSAR and the actual plant conditions. The changes were reviewed to ensure that the plant conditions are acceptable with respect to the design bases for radiation monitoring and sampling. The changes identified by this review do not affect Grand Gulf's compliance with NUREG-0737, Item II.B.3 and Appendix A of 10CFR50, Criterion 13, 61, 63 and 64. Therefore, these changes will not increase the probability of occurrence of an accident. These changes are still bounded by the existing accident analysis in Chapter 15 of the UFSAR. The changes made by this QDR do not prevent any equipment relied upon to mitigate the consequences of a malfunction of equipment important to safety or any evaluated transient or accident from performing its safety function. Therefore, the consequences of a malfunction of equipment important to safety or an accident previously evaluated in the UFSAR is not increased. No new interface is created which would affect components, equipment or systems which perform safety functions. These changes will create no new failure modes not already enveloped by present UFSAR analyses. No new accident precursors are being introduced by this change.

SRASN: NPE-91-049

DOC NO: CR-NPE-90-004

DESCRIPTION OF CHANGE: Change "Active Function for Valves 1P41-F074A/B and 1P41-F189 from "Required Open" to "System Isolation".

REASON FOR CHANGE: Safety function listed for these valves in Table 3.9-3C is incorrect.

SAFETY EVALUATION: The change in the active function designation for valves 1P41-F074A/B and 1P41-F189 on UFSAR Table 3.9-3C from "Required open" to "System Isolation" will have no effect on plant safety. The change will bring the table into agreement with UFSAR Sections 9.2.1 and 9.2.8 and actual plant configuration. No design or analysis change is involved. The change is only to correct an error in the table.

SRASN: NPE-91-050

DOC NO: CR-EPE-91-059

DESCRIPTION OF CHANGE: Revise wording in UFSAR Section 8.2.4 concerning 115KV line capacity computer and annunciator alarms which are discussed, but not presently in the system. The UFSAR revision will reflect plant conditions as tested and "As-Built".

REASON FOR CHANGE: To correct wording concerning computer and annunciator alarms being sounded if the 115KV line capacity decreases below the UFSAR stated limit, while no such alarms exist in the plant. It was determined during startup test that the 115KV Port Gibson line has sufficient capacity to start and operate the required loads with either the South Vicksburg or Lorman line out of service. Consequently there was no need for a capacity monitoring system for the 115KV line, however this was not updated in Section 8.2.4 of the UFSAR.

SAFETY EVALUATION: UFSAR Section 8.2.4 discusses system operating limits for the 115KV lines. Paragraph 2 (Bases for the selection of the operating limits), Part 3 discusses the system capacity. It notes that the 115KV line has a minimum capacity of 609 MVA and computer and annunciator alarms are sounded if the capacity decreases below this limit. The 115KV Port Gibson line was tested with the South Vicksburg line (the stronger of the two lines feeding the Port Gibson substation) out of service and being fed by the Lorman line only. It was found that the line has sufficient capacity to start and operate the required loads for Unit 1 at GGNS. A line monitoring system was originally designed and purchased but after the test was conducted, it was determined that the system would not be needed because the 115KV Port Gibson line has the required capacity. The MP&L dispatchers monitor line integrity and load flows rather than capacity. All switching done on the line by MP&L is cleared with GGNS operators. GGNS operators are kept informed of the line status by MP&L dispatchers verbally. The 115KV Port Gibson line minimum short circuit system capability is 609 MVA with both transmission lines to Port Gibson in service. The operation of the 115KV line will not be changed as a result of this change. In addition, no new interfaces or capabilities are created by this change. Thus, equivalent capability has been established by test, and no unreviewed safety question has been introduced.

SRASN: NPE-91-051

DOC NO: QDR-0208-90

DESCRIPTION OF CHANGE: Revise UFSAR Section 12.3.4.1.3.h to delete the reference to laboratories containing area radiation monitors. Also revise UFSAR Figure 12.3-12 (Radiation Zone Drawing A-0550, Rev. 11) to delete the symbol for an airborne radiation monitor at the door to room OC101. These changes are required to provide clarification of the existing facility conditions.

REASON FOR CHANGE: QDR 0208-90 was written to document a discrepancy in UFSAR Section 12.3.4.1.3.h and the actual plant conditions. The UFSAR indicates that there are area radiation monitors (ARMs) installed in all laboratories. There are no ARMs installed in the Chemistry Laboratories. A review was performed to ensure the acceptability of the plant conditions with respect to the design bases for area radiation monitoring. This review is documented in Engineering Report GGNS-91/0017. During this review a discrepancy was identified in UFSAR Figure 12.3-12 (Radiation Zone Drawing A-0550, Rev. 11). The symbol for an airborne radiation monitor at the door to room OC101 on this drawing should be deleted.

SAFETY EVALUATION: This QDR identifies discrepancies in the UFSAR and the actual plant conditions. The changes were reviewed to ensure that the plant conditions are acceptable with respect to the design bases for area radiation monitoring. The changes identified by this review do not affect Grand Gulf's compliance with 10CFR20, 10CFR50, 10CFR70, and Regulatory Guides 8.2, 8.8 and 8.12, as described in Section 12.3.4.1 of the UFSAR. Therefore, these changes will not increase the probability of occurrence of an accident. These changes are still bounded by the existing accident analysis in Chapter 15 of the UFSAR. The changes made by this QDR do not prevent any equipment relied upon to mitigate the consequences of a malfunction of equipment important to safety or any evaluated transient or accident from performing its safety function. Therefore, the consequences of a malfunction of equipment important to safety or an accident previously evaluated in the FSAR is not increased. No new interface is created which would affect components, equipment or systems which perform safety functions. These changes will create no new failure modes not already enveloped by present UFSAR analyses. No new accident precursors are being introduced by this change.

SRASN: NPE-91-052

DOC NO: NPEFSAR91-0043

DESCRIPTION OF CHANGE: The UFSAR is being changed to eliminate the discussion of two unit operation as it pertains to the Ultimate Heat Sink and to reflect that there is only one Circulating Water System Basin available for use as an alternate makeup water source for the Standby Service Water Basins due to the fact that Unit 2 has been canceled.

REASON FOR CHANGE: In December of 1979, construction of Grand Gulf Unit 2 was deferred in order to concentrate resources on the completion of Unit 1. After Unit 1 had received its Commercial Operating License, Entergy Operations, Inc. formally requested the NRC to revoke the Construction Permit and officially cancel the second unit at the Grand Gulf Nuclear Station. Now that Unit 2 has been canceled, the analysis for two unit operation is not applicable and the use of the Unit 2 Circulating Water System Cooling Tower Basin as a future alternate water source will not be available.

SAFETY EVALUATION: The change to the UFSAR reflects single unit operation of the plant as it pertains to the Ultimate Heat Sink (Standby Service Water Basins) rather than for two unit operation (single unit operation was previously analyzed and incorporated into the UFSAR). The change to the UFSAR does not modify Unit 1 equipment. The volume of water available from only the Unit 1 Circulating Water System Basin, instead of both the Unit 1 and 2 basins, decreases the stated amount of alternate makeup water available from the Circulating Water System to the Ultimate Heat Sink by 50 percent, even though the actual existing volume remains the same since the Unit 2 Circulating Water basin has never been constructed. However, the alternate makeup water available from other existing sources (such as the drainage basins, construction water wells) can still provide the additional 60-day water supply discussed in UFSAR Appendix 3A Section Regulatory Guide 1.27. Therefore, since the Unit 2 Circulating Water basin was to be only one of the possible alternate sources for makeup to the Ultimate Heat Sink, the requirements of Regulatory Guide 1.27 remain satisfied.

The revision (which reflects single unit operation only and the elimination of the Unit 2 Circulating Water Basin as a future source of alternate makeup to the Ultimate Heat Sink) will not require a change to the GGNS Technical Specifications nor will it create an unreviewed safety question.

SRASN: NPE-91-053

DOC NO: QDR-0028-91

DESCRIPTION OF CHANGE: UFSAR Table 7.5-2 is to be revised to show hydrogen analyzer 1P33-N147, with an effective range of 0 to 99 cc(STP)/kg, as the instrument dedicated to the measurement of dissolved hydrogen or total gas concentration in the primary reactor coolant.

REASON FOR CHANGE: At present, UFSAR Table 7.5-2 does not accurately reflect as-built configuration with respect to post accident measurement of dissolved hydrogen or total gas concentration in the primary reactor coolant.

SAFETY EVALUATION: The described UFSAR revision will specify the component dedicated to the measurement of dissolved hydrogen or total gas concentration in the primary reactor coolant, and will document the effective range of this component. Although the effective range of the subject hydrogen analyzer (0 to 999 cc/kg) is significantly less than the minimum effective range required by Regulatory Guide 1.97 (0 to 2000 cc/kg), the measurement capabilities of the dissolved gas sampling system are acceptable.

The acceptance of the GGNS instrument range is based on analysis performed by General Electric, and accepted by the NRC, which demonstrates that the maximum post accident concentration of dissolved gases which would be present in the BWR reactor coolant is 400 cc/kg.

SRASN: NPE-91-054

DOC NO: CR-NPE-91-016

DESCRIPTION OF CHANGE: Remove the references to equal spacing of the head stud tensioners on the reactor head strongback/carousel from section 9.1.4.2.5.7.b and update figure 9.1-32 with the current revision of the source design drawing.

REASON FOR CHANGE: The hoists for the reactor head stud tensioners are suspended from trolleys which travel along a circular monorail. To maintain the spacing between the tensioners and to move them simultaneously, the trolleys are linked together and tied to an air powered tractor. These links are shown on the outline drawing for the strongback carousel (767E693) which is the source of UFSAR figure 9.1-32. Section 9.1.4.2.5.7.b and figure 9.1-32 currently state that these links keep the tensioners equally spaced. The outline drawing describes ten models of reactor head strongback/carousel (part numbers) for various reactor vessel sizes and with varying numbers of head stud tensioners. The model applicable to Grand Gulf Unit 1 is part number 1. Reference to the assembly drawing for the head strongback/carousel and its associated part list (767E572 and PL767E572) shows that the head stud tensioners are not equally spaced.

SAFETY EVALUATION: The removal of references to equal spacing of the head stud tensioners on the reactor head strongback/carousel from section 9.1.4.2.5.7.b and the updating figure 9.1-32 are acceptable. The change in spacing of the head stud tensioners will not require a change to the GGNS Unit 1 Technical Specifications and it will not reduce the margin of safety as defined in the basis for any technical specification. It will not increase the probability of occurrence or the consequences of any previously evaluated accident or a malfunction of equipment important to safety and it will not create the possibility for an accident or a malfunction of equipment important to safety of a different type.

SRASN: NPE-91-055

DOC NO: CN-91-150

DESCRIPTION OF CHANGE: Precoat filters are used in the liquid radioactive waste (radwaste) systems at GGNS for the treatment of equipment and floor drain wastes. The spent filter aid material discharged from this equipment constitutes a sizable fraction of the low level radioactive wastes which must be packaged and shipped to a low level waste disposal site. The modifications made to piping and instrumentation provide for the addition of standby body feed pump (NSG17C011C) with suction from the solid radioactive waste holding tank (NSG18A001C),

REASON FOR CHANGE: The modifications made are intended to improve the performance of the existing liquid radwaste filtration subsystem. The addition of standby body feed pump (NSG17C011C) with suction from the solid radioactive waste holding tank (NSG18A001C) will allow injection of new filter aid material into the floor drain or equipment filter influent streams through injectors NSG17D036B and NSG17D036A, respectively. This modification will enhance the performance of the liquid radwaste filtration subsystems by maintaining uninterrupted system operation in the event of failure or maintenance of either of the existing body feed pumps (NSG17C011A and NSG17C011B) or their associated subsystem. The addition of the standby body feed pump will also allow injection of the spent filter aid material discharge from the equipment drain filter into the floor drain filter influent stream through injector NSG17D036B. This modification will enhance the performance of the liquid radwaste filtration subsystem by maintaining the porosity of the suspended solids contaminant layer deposited during the floor drain filtration cycle with spent filter aid material discharged from the equipment drain filter. Consistent with Entergy sustaining priorities and federal guidelines, this efficient utilization of spent filter aid material discharged from the liquid radwaste equipment drain filter will result in an overall reduction in low level radioactive waste generation rates.

SAFETY EVALUATION: Updated Final Safety Analysis Report (UFSAR) sec. 3.2 classifies the radwaste systems (system designators G17 and G18) and all their components as "Other" meaning that loss of system function would not affect safe shutdown of the plant. Per UFSAR Table 3.2-1, the radwaste systems are considered Non-Q, Non-Safety Related, Non-Seismic, and NRC Quality Group D. The modifications made by this CN to piping and instrumentation will not change these criteria for the liquid and solid radwaste systems. Furthermore, the postulated worst case failures (radwaste tank rupture and piping leaks) analyzed in UFSAR sections 15.7.2 (release to atmosphere) and 15.7.3 (release to ground water) envelope the occurrence and consequences of postulated accidents due to any failure associated with the modifications of this CN.

SRASN: NPE-91-056

DCP NO: NPEFSAR91-0041

DESCRIPTION OF CHANGE: UFSAR Table 3.9-28 Note (2)b, which addressed the applicability of ASME Code Case N-242 to the Unit 2 ADS air receivers, is being deleted to reflect the cancellation of Unit 2.

REASON FOR CHANGE: In December of 1979, construction of Grand Gulf Unit 2 was deferred in order to concentrate resources on the completion of Unit 1. After Unit 1 had received its Commercial Operating License, Entergy Operations, Inc. formally requested the NRC to revoke the Construction Permit and officially cancel the second unit at the Grand Gulf Nuclear Station. Due to cancellation of Unit 2 Note (2)b in UFSAR Table 3.9-28 no longer applies.

SAFETY EVALUATION: The change to the UFSAR deletes the reference to ASME Code Case N-242 which was applicable to the purchase of the Unit 2 ADS Air Receivers. Now that Unit 2 has been canceled, there is no necessity for UFSAR Table 3.9-28 to contain this reference. The reference to the code case did not apply to the Unit 1 ADS air receivers. Furthermore, the Unit 1 ADS air receivers are to be replaced in accordance with Specification SERI-M-908.0. ASME Code Case N-242 has been annulled and is not applicable to Specification SERI-M-908.0. The change to the UFSAR is a software change only in that it does not modify Unit 1 equipment.

The deletion of the note pertaining to ASME Code Case N-242 in UFSAR Table 3.9-28 will not require a change to the GGNS Technical Specifications nor will it create an unreviewed safety question.

SRASN: NPE-91-057

DOC NO: NPEFSAR91-0042

DESCRIPTION OF CHANGE: UFSAR Sections 3.11.4.5, 3C.3.4, 9.4.5.2.3 and 9.4.5.5.2 describe the configuration of the Unit 1 and 2 components in the A and B Standby Service Water Pumphouses. Now that Unit 2 has been canceled, the reference to Unit 2 is no longer appropriate, therefore the descriptions are being revised accordingly.

REASON FOR CHANGE: In December of 1979, construction of Grand Gulf Unit 2 was deferred in order to concentrate resources on the completion of Unit 1. After Unit 1 had received its Commercial Operating License, Entergy Operations, Inc. formally requested the NRC to revoke the Construction Permit and officially cancel the second unit at the Grand Gulf Nuclear Station. Due to cancellation of Unit 2 the description of components located in the Standby Service Water Pumphouses is being revised. The Unit 2 components not in use by Unit 1 (i.e., Unit 2 SSW Pumps, Unit 2 HPCS service water Pump, the Unit 2 SSW Cooling Tower Fans, and the B Unit 2 SSW Pumphouse vent fan in SSW Pumphouse B) are categorized as abandoned in place, if they are actually installed. In effect the abandoned in place components are treated as a part of the SSW Basin/Pumphouse structure rather than active components, therefore their status is not required to be addressed in the UFSAR.

SAFETY EVALUATION: The change to the UFSAR reflects the configuration of the Standby Service Water Pumphouses for Unit 1 operation alone rather than for two unit operation. The change to the UFSAR is a software change only in that it does not modify Unit 1 equipment. The use of some of the Unit 2 equipment for support of Unit 1 was previously addressed by other Safety Evaluations and UFSAR Change Notices.

The revision of the description of the Standby Service Water Pumphouses configuration will not require a change to the GGNS Technical Specifications nor will it create an unreviewed safety question.

SRASN: NPE-91-058

DOC NO: NPEFSAR91-0044

DESCRIPTION OF CHANGE: The UFSAR is being changed to eliminate the discussion of two unit operation as it pertains to the Turbine Building Ventilation System's pressure control system due to the fact that Unit 2 has been canceled.

REASON FOR CHANGE: In December of 1979, construction of Grand Gulf Unit 2 was deferred in order to concentrate resources on the completion of Unit 1. After Unit 1 had received its Commercial Operating License, Entergy Operations, Inc. formally requested the NRC to return the Construction Permit and officially cancel the second unit at the Grand Gulf Nuclear Station. Now that Unit 2 has been canceled, the discussion of two unit operation is not applicable except to the extent to explain why the Unit 1 Turbine Building Ventilation System pressure control system has a Unit 1/Unit 2 selector switch in the control room.

SAFETY EVALUATION: The change to the UFSAR reflects single unit operation of the plant as it pertains to the Turbine Building Ventilation System's pressure control system rather than for two unit operation. The change to the UFSAR does not modify Unit 1 equipment. The Turbine Building Ventilation System's pressure control system is currently administratively maintained in the UNIT 1 mode of operation, therefore no equipment or procedural change will be required as a result of this UFSAR change.

The revision will not require a change to the GGNS Technical Specifications nor will it create an unreviewed safety question.

SRASN: NPE-91-059

DOC NO: CR-NPE-91-0048

DESCRIPTION OF CHANGE: This change eliminates the position of Manager, Nuclear Design from the Nuclear Plant Engineering organization and eliminates a separate Administrative Support Group.

REASON FOR CHANGE: This change is being made to increase the efficiency and effectiveness of the Nuclear Plant Engineering organization by eliminating an unnecessary level of management and a redundant organizational group.

SAFETY EVALUATION: The change is administrative in nature and has no adverse affects on the functioning of the design engineering organization as the functions and responsibilities previously performed by the Manager, Nuclear Design will be performed by the three Principal Engineers for their respective disciplines. This change will improve effectiveness by allowing each of the discipline Principal Engineers greater control over the functioning of their respective discipline as well as providing increased efficiency by eliminating one level of required approval for documents and actions enabling the design engineering organization to better provide technical support to the operating organization.

There will be no effect on the functioning of the design engineering organization from the elimination of the Administrative Support Group as all necessary functions are being absorbed by other groups with some redundant functions being eliminated. All functions of this group were administrative in nature and has no direct bearing on the safe functioning of GGNS.

SRASN: NPE-91-060

DOC NO: NPEFSAR91-0045

DESCRIPTION OF CHANGE: Revision of the description, in UFSAR Section 10.4.5.3, concerning the chlorination of the Circulating Water System and the potential of flooding from the Circulating Water System to reflect cancellation of Unit 2.

REASON FOR CHANGE: In December of 1979, construction of Grand Gulf Unit 2 was deferred in order to concentrate resources on the completion of Unit 1. After Unit 1 had received its Commercial Operating License, Entergy Operations, Inc. formally requested the NRC to revoke the Construction Permit and officially cancel the second unit at the Grand Gulf Nuclear Station. Now that Unit 2 has been canceled, the discussion of two unit operation is not applicable.

SAFETY EVALUATION: Changes are being made to UFSAR Section 10.4.5.2 in the discussion of chlorination of the Circulating Water System. The existing wording includes the Unit 2 Circulating Water System which is no longer appropriate due to the cancellation of Unit 2.

Changes are being made to UFSAR Section 10.4.5.2 in the discussion of flooding potential from the Circulating Water System. The existing wording includes the Unit 2 Circulating Water System and the Unit 2 Turbine Building.

The inclusion of the Unit 2 Circulating Water System as an additional source of flooding for Unit 1 is no longer appropriate since the system doesn't presently exist and Unit 2 has been canceled.

The Unit 2 Turbine Building and the security walls between it and the Unit 1 Turbine Building are still applicable since the security wall would act to retain the water lost from the Unit 1 Circulating Water System and the Unit 2 Turbine Building would be flooded if the security wall was to be removed or if it failed.

The revision does not modify any plant equipment or change the mode of operation of any safety related equipment and therefore will not require a change to the GCNS technical specifications nor will it create an unreviewed safety question.

SRASN: NPE-91-061

DOC NO: DCP-88-0016-SOU-R00

DESCRIPTION OF CHANGE: Replace airtight door at elevation 166' of the Turbine Building/Auxiliary Building interface wall.

REASON FOR CHANGE: To increase reliability and to reduce the frequency of repair activities which adversely affect plant operations.

SAFETY EVALUATION: The new door was constructed in a manner which meets UL label construction for 3-hour barriers as required by the UFSAR. The design meets or exceeds all applicable structural, airtight, and fire protection requirements. The door has been designed to withstand differential pressures and seismic loads in accordance with the UFSAR and Civil Design Criteria. The new door will perform its function as an airtight secondary containment barrier in accordance with technical specification requirements.

SRASN: NPE-91-062

DOC NO: DCP-88-0058-S00-R00

DESCRIPTION OF CHANGE: The alarm setpoint for the drywell equipment drain sump temperature was increased from 120 to 130 degrees Fahrenheit.

REASON FOR CHANGE: The annunciator was set at the same setpoint as the pump recirculation initiation. One of the two sump pumps starts at the 120 degree setpoint to recirculate the sump water through a heat exchanger to reduce the sump water temperature to a value no greater than 120 degrees. The identical temperature setpoints for the alarm and the sump pump recirculation initiation caused the alarm to annunciate a normal operating condition in addition to annunciating a sump temperature condition requiring operator action.

SAFETY EVALUATION: The setpoint change for the high sump temperature alarm eliminates a nuisance alarm and establishes a meaningful function for the alarm. The alarm has no active control function. The alarm is not intended to be used for leak detection. The alarm provides information indicating potential failure or degradation of the sump temperature control equipment. The alarm function is not addressed by the technical specifications.

SRASN: NPE-91-063

DOC NO: DCP-88-052-S01-R00

DESCRIPTION OF CHANGE: The access control area and adjacent portions of the control building at elevation 93' were renovated. The work results in the conversion of locker room space to offices and opens the access control area to provide for better visual control by Health Physics personnel.

REASON FOR CHANGE: To provide a more usable work space.

SAFETY EVALUATION: Fire boundaries are not modified by the design. Floor drain modifications will not affect the ability of the system to remove flow from possible pipe breaks at higher elevations of the building as described in the UFSAR. No essential equipment exists in the affected area and no II/I hazard has been created with respect to safety related conduit. The analysis of safe shutdown in the event of a fire is not adversely affected by this change. No parameters addressed by the technical specifications are affected by this change. The room name identified in Technical Specification Table 3.3.7.9-1 was changed by Amendment 68.

SRASN: NPE-91-064

DOC NO: DCP-86-0130-800-R00

DESCRIPTION OF CHANGE: A Zone Status Display (ZSD) was installed in the Central Alarm Station (CAS) and the Secondary Alarm Station (SAS). The Zone Status Displays are composed of low level lighting driven by surface mounted computer components.

REASON FOR CHANGE: To enhance zone point monitoring.

SAFETY EVALUATION: The security and fire protection system computer is not safety related and has no direct interface with safety related systems. The II/I seismic hazards have been reviewed and no new hazards are created. Materials and construction standards applicable to the system were adhered to. Requirements for separation criteria, Appendix R, and seismic supports were adhered to. The ZSDs are passive devices and will not affect the computers ability to provide warning to the control room.

SRASN: NPE-91-065

DOC NO: DCP-90-0144-S00-R00

DESCRIPTION OF CHANGE: Existing instrumentation will be used to monitor the ambient temperature of one of the Reactor Protection System (RPS) Motor Generator (MG) set rooms. An annunciator is added by this change to alarm in the control room when the ambient temperature of the room increases above the setpoint.

REASON FOR CHANGE: High temperature in the RPS MG set rooms had been identified as a problem. The Electrical Protection Assembly (EPA) breakers are sensitive to ambient temperature above approximately 100 degrees Fahrenheit causing them to trip open. The high temperature conditions occur during any loss of cooling in the room. The cooling for both RPS MG set rooms is provided by one fan coil unit, therefore only one room will be monitored. This change will provide the control room operators with indication of potential temperature problems and allow them to take the necessary action to cool the rooms before the EPA breakers trip open.

SAFETY EVALUATION: The addition of the annunciator does not change any intended design function for any components, systems, or structures. No new interface is created which would affect components, equipment, or systems which perform safety functions. The annunciator is not used for any technical specification basis and is not essential in monitoring compliance with any technical specification.

SRASN: NPE-91-066

DOC NO: CFR88-0051R00

DESCRIPTION OF CHANGE: The class 1E uninterruptible power supply (UPS) system is separated into four divisions with one inverter assigned to each division. UPS divisions 1 and 3 are powered by ESF division 1 and UPS divisions 2 and 4 are powered by ESF division 2. This change replaces the existing four class 1E inverters with four new class 1E inverters and four new alternate sources (voltage regulating transformer), each with a static transfer switch and a maintenance bypass switch per UPS division.

REASON FOR CHANGE: This change reduces the potential for scrams due to loss of inverters. State of the art inverters with a synch circuit will allow maintenance without deenergizing loads, thus improving inverter reliability.

SAFETY EVALUATION: This design is replacing the existing class 1E UPS system with a new class 1E UPS system. This replacement will increase the reliability of the class 1E UPS system by providing a static transfer switch and an alternate source which the UPS loads will transfer to if its inverter develops trouble. Also the new system will provide a means for performing preventative maintenance on the system, without interruption of power to its loads. The new class 1E inverters and class 1E alternate sources are both seismically qualified per IEEE 344-1975. They are also qualified to operate within the environment that they will be exposed to, per IEEE 323-1974. The function of the class 1E UPS system is to provide 120VAC power to control and instrumentation circuits. These control and instrumentation circuits that receive power from the class 1E UPS system will not be modified by this design. Proper isolation will be maintained per Reg. Guide 1.75. The cables to be routed for this DCP will meet Reg. Guide 1.75 separation criteria.

This change will not add any additional loads to the UPS distribution panel. This design will not add any additional loads to the existing ESF battery load profiles found in the GGNS unit one technical specifications.

SRASN: NPE-91-067

DOC NO: DCP-82-0371-S00-R00

DESCRIPTION OF CHANGE: This design change to the security system installed a power switch for each supervised line board to eliminate the need to turn off power to a full multiplexer card rack when replacing a supervised line board that has failed.

REASON FOR CHANGE: In the past when the power was turned off, approximately 80 different alarm monitoring points were made inoperable. With this change the number of inop monitoring points is reduced to 8.

SAFETY EVALUATION: This change provides an enhancement to plant security system design. Addition of the power switch for each supervised line board lessens the number of points without alarm monitoring for any given failed board replacement. Accident evaluations included in the FSAR do not consider plant security systems as part of the evaluations. The plant security system is not safety related and this change does not affect any safety related equipment evaluated in the FSAR. The margin of safety is not reduced.

SRASN: NPE-91-081

DOC NO: GGNS-M-183.3-R00

DESCRIPTION OF CHANGE: Specification GGNS-M-183.3 was written to provide the criteria for the chemical cleaning and decontamination of portions of the Recirculation System (B-33), the Reactor Water Cleanup Systems (G-33 and G-36) and the Fuel Pool Cooling and Cleanup System (G-41). This safety evaluation provides the basis for release of this specification for bid but does not provide a complete basis for the chemical cleaning. After selection of vendor and identification of vendor procedures and equipment, this 50.59 must be augmented by adding required information covering items which cannot be addressed until vendor information is known. Examples of such items are material review for compatibility with the cleaning chemicals and heavy load analysis. They cannot be completed until the chemicals to be used and the weight of the vendor equipment are known.

Those portions of the Recirculation System, Reactor Water Cleanup System and Fuel Pool Cooling and Cleanup System to be cleaned and decontaminated are specified in Specification GGNS-M-183.3.

REASON FOR CHANGE: Chemical cleaning and decontamination of these systems are needed to reduce the radiation exposure of personnel working in the vicinity of these systems.

SAFETY EVALUATION: The scope of this safety evaluation is limited to Specification GGNS-M-183.3 which specifies the criteria which must be met by the vendor. In order to prevent any negative impact on the design basis and the functional capabilities of the systems to be decontaminated, the vendor is required by this specification to demonstrate that the chemicals to be used and the procedures to be followed will not result in unacceptable degradation (e.g., excessive pipe wall thinning) of the affected systems. Other related issues which must be addressed before chemical cleaning can proceed but which are outside the scope of this specification are:

- Radiological and chemical spills
- Heavy load analysis
- Disposal of liquid and solid wastes
- Load path analysis for protection of Engineered Safety Items

These related issues will be addressed either in a later revision of this safety evaluation or in a separate safety evaluation.

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Based on the criteria included in Specification GGNS-M-183.3, any cleaning and decontamination process meeting such criteria and selected for implementation at Grand Gulf will have no impact on the design bases, functional capabilities, and required design margins of the Recirculation System, Reactor Water Cleanup System, and Fuel Pool Cooling and Cleanup System. Therefore, it is concluded that this specification does not increase the probability or the consequences of any accident evaluated in the SAR, does not create the possibility of a new accident or malfunction, and does not reduce any margin of safety defined in any technical specifications.

SRASN: NPE-91-082

DOC NO: EER-91-6310

DESCRIPTION OF CHANGE: This evaluation will assess the impact to safety of Reactor Water Cleanup (RWCU) operation with valve Q1G33F406A closed during all modes of operation. Valve F406A is currently closed only during low power operation. The change in valve position will create a change in the normal RWCU injection flow path. RWCU return flow through the "A" feedwater line will be isolated with F406A closed.

REASON FOR CHANGE: MNCR 0214-89 identified a problem with reverse flow through valve Q1R21F065A being stuck in the closed position. A root cause evaluation determined that the condition was due to heating of the valve stem by high temperature RWCU return flow which is injected a short distance downstream of F065A. The MNCR disposition proposed several actions to prevent recurrence of the problem, including isolation of the RWCU return line when F065A is closed and RWCU temperature significantly exceeds feedwater line temperature.

SAFETY EVALUATION: Plant operation with valve F406A closed in all modes represents a new valve lineup for normal power operation. The new lineup will result in RWCU flow returning to the vessel through the "B" feedwater line only. Therefore, analyses have been performed to ensure the new operating condition will have no adverse impact on plant operation. Calculation MC-Q1G33-91116, Rev. 0 has evaluated the effect of the new valve lineup on RWCU system flow rate. The reduction in RWCU flow was shown to be negligible. Calculation MC-Q1G33-90116, Rev. 0 has evaluated the effect of the new valve lineup on pipe stress levels. This calculation shows that stresses will remain within the ASME Section III code allowables.

The change in valve lineup for RWCU will have no impact on Technical Specifications 3/4.3.2, 3/4.6.4, or any other technical specification. The T/S Bases are also unaffected. The change will not alter the function of the RWCU system or its ability to perform its safety function of maintaining the integrity of the reactor coolant pressure boundary. No new system interfaces or accident precursors are created by the change. The change will not impact the limiting conditions for operation or surveillance requirements of any technical specification and will not reduce any margins of safety. Therefore, this change will not require any change to the technical specification nor will it create an unreviewed safety question.

SRASN: NPE-91-083

DOC NO: CR-NPE-91-040

DESCRIPTION OF CHANGE: The following changes to the UFSAR are made by this change request:

1. Revise Subsections 3.8.1.6.4.a and 3.8.3.6.4.a to delete ASME subsection NF requirements for RPV anchor bolts for Unit 2.
2. Revise Subsection 3.8.4.4.5 to delete the reference to ongoing Unit 2 construction activities.
3. Delete the Unit 2 specific information on factors of safety against sliding, overturning and buoyancy, from Table 3.8-1.

REASON FOR CHANGE:

1. ASME subsection NF requirements for RPV anchor bolts are only applicable to Unit 2. Since Unit 2 has been cancelled, these requirements should be deleted.
2. Since Unit 2 has been cancelled, discussion of ongoing Unit 2 construction activities is no longer appropriate. Therefore, this paragraph is revised to remove the reference to ongoing Unit 2 construction.
3. The factors of safety for the Unit 2 Auxiliary Building against sliding, overturning and buoyancy should be deleted from Table 3.8-1 for the following reasons:
 - a. Unit 2 has been cancelled.
 - b. Similar factors of safety for other Unit 1 buildings are not provided in the current revision of this UFSAR table.

SAFETY EVALUATION: The above changes have no safety impact on Unit 1 for the following reasons:

1. ASME subsection NF requirements are not applicable to Unit 1. The deletion of these requirements affects only Unit 2 which has been cancelled.
2. The revision to Subsection 3.8.4.4.5 deletes the reference to ongoing Unit 2 construction activities. Although a select number of penetrations may be left open for cable pulling operations, they are acceptable because the tornado depressurization effects resulting from such open penetrations have been analyzed and the results were used for the design of internal walls in the Control Building.

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3. The change to Table 3.8-1 deletes the factors of safety for the Unit 2 Auxiliary Building against sliding, overturning, and buoyancy. No change in the values of these factors of safety will result from this UFSAR change request. Deletion of these data from Table 3.8-1 is justified on the basis of Unit 2's cancellation and the fact that similar data have not been included in the current revision of this table for other Unit 2 buildings. There will be no safety impact on Unit 1.

SRASN: NPE-91-084

DOC NO: CR-NPE-91-039

DESCRIPTION OF CHANGE: This change is a UFSAR change which indicates Unit 2 has been cancelled and that updates the discussion of turbine missiles to reflect one turbine instead of two.

REASON FOR CHANGE: The reason for the change is to make the UFSAR discussion reflect the cancellation of Unit 2.

SAFETY EVALUATION: The current plant construction and operating condition (one plant turbine) was evaluated and the results reported in the reference. The results indicate that the UFSAR discussions on turbine missiles must be updated in light of the cancellation of Unit 2. The plant turbines are non-safety grade and serve no safety function. The proposed change indicates the probability of a damaging missile is by the deletion of the second plant turbine. This change does not increase the consequences of an accident already evaluated in the UFSAR. The plant turbines are not relied upon to mitigate the effects of postulated accidents. The overspeed devices are relied upon to function to prevent turbine damage, but their functioning is not affected by this change. Therefore, the change does not increase the probability of an equipment malfunction or consequences of equipment malfunction for equipment important to safety. The change does not create the possibility of an accident or an equipment malfunction different from those already evaluated in the UFSAR. The margin of safety discussed in the SAR is not reduced by deletion of the second turbine.

SRAIN: NPE-91-085

DOC NO: CR-NPE-91-038

DESCRIPTION OF CHANGE: UFSAR Subsection 3.1.2.1.5 is revised by this UFSAR change request to reflect the cancellation of Unit 2. This subsection contains a discussion of General Design Criterion 5 - Sharing of Structures, Systems, and Components. Since Unit 2 has been cancelled, this criterion is not applicable. The proposed UFSAR change replaces the entire discussion on General Design Criterion 5 with the following: "Unit 2 has been cancelled. Therefore, this criterion is not applicable."

REASON FOR CHANGE: Unit 2 construction has been terminated and Unit 2 cancelled.

SAFETY EVALUATION: This change has no safety impact because it only revises Subsection 3.1.2.1.5 of the UFSAR to reflect that General Design Criterion 5 is not applicable to GGNS following the cancellation of Unit 2. Therefore, it does not increase the probability or the consequences of any accident evaluated in the SAR, does not create the possibility of a new accident or malfunction, and does not reduce any margin of safety defined in any technical specification.

SRASN: NFE-91-086

DOC NO: CR-NFE-91-036

DESCRIPTION OF CHANGE: This change is a UFSAR change only which deletes reference to "either unit" since Unit 2 has been cancelled.

REASON FOR CHANGE: The reason for the change is to delete reference to cancelled Unit 2.

SAFETY EVALUATION: A review was conducted of the calculations which deal with atmospheric dispersion factors used for the evaluation of the effects on control room occupants resulting from accidental releases of radioactivity. The review found that the accident analyses use atmospheric dispersion factors which reflect the current state of plant construction (partially completed Unit 2) or remain conservative in light of the cancellation of Unit 2. Therefore, the proposed change does not increase the probability of an accident nor increase the consequences of an accident already evaluated in the UFSAR. The change does not involve the functioning of plant equipment in any way. Therefore, the change does not increase the probability of an accident nor increase the consequences of an accident already evaluated in the UFSAR. The change does not involve the functioning of plant equipment in any way. Therefore, the change does not increase the probability of an equipment malfunction or consequences of equipment malfunction for equipment important to safety. The change does not create the possibility of an accident or an equipment malfunction different from those already evaluated in the UFSAR. The margin of safety is not reduced.

SRASN: NPE-91-087

DOC NO: CR-NPE-91-035

DESCRIPTION OF CHANGE: This change is a UFSAR change only which indicates Unit 2 has been cancelled and that the cooling tower plume discussion for two towers is still conservative for one tower.

REASON FOR CHANGE: The reason for the change is to make the UFSAR discussion reflect the cancellation of Unit 2.

SAFETY EVALUATION: The current plant construction and operating condition (one operating cooling tower) was evaluated and the results reported in the reference. The results indicate that the UFSAR discussions on cooling tower plume length and other meteorological variables remain conservative in light of the cancellation of Unit 2. In addition, the natural draft cooling towers are non-safety-grade and serve no safety function. Therefore, the proposed change does not affect the probability of an accident nor increase the consequences of an accident already evaluated in the UFSAR. The cooling towers are not relied upon to mitigate the effects of postulated accidents. Therefore, the change does not increase the probability of an equipment malfunction or consequences of equipment malfunction for equipment important to safety. The change does not create the possibility of an accident or an equipment malfunction different from those already evaluated in the UFSAR. The margin of safety is not reduced.

SRASN: NPE-91-088

DOC NO: CR-NPE-91-031

DESCRIPTION OF CHANGE: FSAR Table 9.5-10, which currently specifies that both the engine driven lube oil pump and the auxiliary lube oil pump must be operational in order for a Standby Diesel Generator to be considered OPERABLE, is being revised to indicate that the auxiliary lube oil pump is not required to be operational in order for a Standby Diesel Generator to be considered OPERABLE.

REASON FOR CHANGE: The auxiliary lube oil pump is a redundant full capacity backup for the engine driven lube oil pump and is not required to be operational for the Standby Diesel Generator to be OPERABLE.

SAFETY EVALUATION: The change being made to Table 9.5-10 by FSAR Change Request NPEFSAR91/0031 in no way changes or alters the design or any of the operating parameters associated with the Standby Diesel Generator Lube Oil System, therefore the probability of occurrence or the consequences of an accident previously evaluated in the SAR are not increased. Revising Table 9.5-10 to reflect that the auxiliary lube oil pumps are not required to be operational in order for the Standby Diesel Generators to be considered OPERABLE in no way affects the availability or capability of the Standby Diesel Generators to perform their safety function, therefore the change in no way increases the probability of occurrence or the consequences of a malfunction of equipment important to safety previously evaluated in the SAR. No new failure modes are being created, the onsite electrical sources can still sustain a single failure and perform their safety function. The change being made to Table 9.5-10 will not require a change to the GGNS Unit 1 Technical Specifications or reduce the margin of safety as defined in the basis for any technical specification.

SRASN: NPE-91-089

DCP NO: CR-NPE-91-030

DESCRIPTION OF CHANGE: FSAR Table 9.5-8, which currently specifies that both the engine drive jacket water pump and the auxiliary jacket water pump must be operational in order for a Standby Diesel Generator to be considered OPERABLE, is being revised to indicate that the auxiliary jacket water pump is not required to be operational in order for a Standby Diesel Generator to be considered OPERABLE.

REASON FOR CHANGE: The auxiliary jacket water pump, which is redundant full capacity backup for the engine driven jacket water pump, is not required to be operational for the Standby Diesel Generator to be OPERABLE.

SAFETY EVALUATION: The change being made to UFSAR Table 9.5-8 in no way changes or alters the design or any of the operating parameters associated with the Standby Diesel Generator Jacket Water System, therefore the probability of occurrence or the consequences of an accident previously evaluated in the SAR are not increased. Revising Table 9.5-8 to reflect that the auxiliary jacket water pumps are not required to be operational in order for the Standby Diesel Generators to be considered OPERABLE in no way affects the availability or capability of the Standby Diesel Generators to perform their safety function, therefore the change in no way increases the probability of occurrence or the consequences of a malfunction of equipment important to safety previously evaluated in the SAR. No new failure modes are being created, the onsite electrical sources can still sustain a single failure and perform their safety function. The change being made to Table 9.5-8 will not require a change to the GGNS Unit 1 Technical Specifications or reduce the margin of safety as defined in the basis for any technical specification.

SRASN: NPE-91-90

DOC NO: CR-NPE-91-009

DESCRIPTION OF CHANGE: A Procurement Engineering Group was recently formed in the Nuclear Plant Engineering (NPE) organization. The group is under the direction of the Manager of Engineering Support. The group is responsible for making independent engineering and design basis judgements related to procurement matters in the Nuclear Plant Engineering organization and those associated with the plant.

Formation of the Procurement Engineering Group will require revision of the Management and Technical Organizations Section 13.1 of the UFSAR to identify the existence of and functional responsibilities for the group.

REASON FOR CHANGE: Section 13.1 of the UFSAR needs to be revised to make it consistent with the present organization configuration of Nuclear Plant Engineering.

SAFETY EVALUATION: The Procurement Engineering Group will ensure the design basis of the plant by providing a quality, cost effective, engineering basis for the procurement of materials required for the operation of the plant. The addition of the Procurement Engineering Group into the NPE organization constitutes a purely administrative change only to the UFSAR and will not have a direct affect on safety or the operation of the plant.

SRASN: NPE-91-091

DOC NO: TEMP ALT 91-0019

DESCRIPTION OF CHANGE: A thermal performance test will be conducted on the Circulating Water (CW) system natural draft cooling tower. The test will be conducted with the main turbine, condenser, and cooling tower in service and with the plant operating at or near rated reactor thermal power.

A pitot tube will be inserted into the CW lines where the existing vortex shedding device is located in order to accurately measure the CW flowrate. Resistance Temperature Detectors (RTDs) will be placed as noted below:

1. Tower basin at the entrance to the CW supply lines to measure CW cold temperature.
2. Tower distribution canals to measure CW hot temperature.
3. Inside the cooling tower stack at the approximate level of the throat area to measure exit air temperature.

Inclined manometers will be used to measure the Differential Pressure (DP) across the fill.

Mechanical driven psychrometers will be located at four locations around the base of the tower to measure the inlet air temperature (dry bulb & wet bulb).

The thermal performance data will be used to quantify the extent of thermal performance degradation due to:

1. Increased DP across the fill material due to plugged fill passages.
2. Increased temperature differential between the CW side and the air side of the tower indicative of fouling on the fill material.
3. Possible material damage to nozzles or fill material which could contribute to fill bypass.
4. Possible reduction in CW flowrate.

REASON FOR CHANGE: Temp Alt 91-0019 is being issued to facilitate thermal performance testing of the natural draft cooling tower. The thermal performance of the cooling tower has been slowly but continuously degrading over the past 18 months, except for a brief improvement noted immediately after the fourth refueling outage (RF04).

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SAFETY EVALUATION: The CW system is not addressed in the GGNS technical specifications; however, the condenser vacuum setpoint is addressed. The thermal performance test does not alter or affect the condenser vacuum low setpoint as addressed in Technical Specification 3/4.3.2 for main steam line isolation. The test will not otherwise affect plant operation as described by the technical specifications.

An increase in reactor pressure as a result of a turbine trip is evaluated in SAR Chapter 15. Loss of the CW system may result in a turbine trip through the loss of condenser vacuum. The test will use existing isolation valves to remove the vortex shedding devices and to insert a pitot tube into the CW piping to prevent disrupting the CW supply to the condenser. Removal of the vortex shedding devices will therefore not adversely affect the CW supply to the condenser and will therefore not adversely affect condenser vacuum.

The test described in this safety evaluation will maintain all controls normally depended upon to respond to changes in CW system operation, except that the CW low flow control room signal will be erroneous and the automatic acid feed isolation based on low CW flow will be defeated during the test. Manual closure of the acid feed injection valves and other control room indications of CW pump trip will be available and must be relied upon during the test.

The test will not alter or affect the operability of existing safety related equipment. In addition, a CW system analysis has shown that failure of the CW system will not compromise any safety related systems or prevent safe shutdown. The CW system is described as safety class "other".

The described test will not alter the design, function, or operation of any equipment important to safety as evaluated in the SAR. The CW system serves no safety related function. The test will not compromise any safety related system or prevent safe shutdown since the test will not create any new interface with equipment important to safety or prevent such equipment from operating as designed.

Turbine building flooding by a gross failure of the CW piping has been evaluated in the SAR. No additional modes of failure are postulated by conducting the thermal performance test, therefore the existing evaluations are considered bounding for the system.

The technical specifications do not contain any margins of safety for the operation or design of the CW system. The described test does not affect or prevent safe shutdown of the reactor vessel.

SRASN: NPE-91-093

DOC NO: MNCR-0048-90

DESCRIPTION OF CHANGE: According to the UFSAR, there will be no building-to-building interaction between the containment and the auxiliary building during a seismic event because a 2-inch separation is provided along all boundaries between these structures. Consequently no seismic interaction between these structures has been considered in their design or in the preparation of seismic floor response spectra for these structures. In addition, the 2-inch separation allows unencumbered differential settlement between these structures. Water stops are installed across these gaps to limit the spread of flood water in order to prevent flood damage to equipment required for achieving safe plant shutdown.

According to this Material Status Information Report (MNCR), the required 2" gap has not been provided at all of the structural boundaries between the containment and the auxiliary building. The effects of this deviation on the structural design and the integrity of the embedded water stops have been evaluated and determined acceptable.

REASON FOR CHANGE: This evaluation documents the acceptability of having no gaps at 9 out of 15 locations where the auxiliary building walls extend above the containment building foundation slab.

SAFETY EVALUATION: The impact of the lack of a seismic gap on the actual performance of the containment and auxiliary buildings during normal operation as well as during a seismic event is negligible and will not prevent these buildings from performing their design safety functions. It does not require any changes in the existing structural and functional design basis of either one of these structures. The seismic design and floor response spectra for both structures are maintained and the embedded water stops will not be adversely affected following a Safe Shutdown Earthquake (SSE). Therefore, the existing condition will not increase the probability of occurrence of an accident previously evaluated in the UFSAR nor increase the consequences of any accident. Also, there is no increase in the probability of a malfunction of equipment important to safety previously evaluated in the UFSAR. Neither is there a reduction in the margin of safety as defined in the basis for any technical specification.

SRASN: NPE-91-094

DOC NO: CN-91-0094

DESCRIPTION OF CHANGE: This change removes the design requisite on Minor Change Package (MCP) 90/1059 for installation of a square root extractor and installs square root indicator scale to Instrument 1E22-FI-R603 in the instrument loop containing transmitter 1E22-FT-N005 and flow indicator 1E22-FI-R603.

REASON FOR CHANGE: Re-evaluation of the design requisite for a linear scale on flow indicator 1E22-FI-R603 has resulted in acquisition of additional information (Reference 7) which justifies elimination. Removal of this design requisite permits installation of a square root scale and elimination of the need to install square root extraction instrumentation.

SAFETY EVALUATION: Removal of the design requisite to install square root extraction instrumentation to the instrument loop containing Instruments 1E22-FT-N005 and 1E22-FI-R603 will save installation costs and will maintain the relatively simple instrument loop that presently exists. Installation of a square root scale to maintain direct indication of flowrate by 1E22-FI-R603 will also improve indicator readability at the upper end of the indicator scale which includes the normal system flowrate.

SRASN: PLS-91-001

DOC NO: W.O. #51068

DESCRIPTION OF CHANGE: Some primary water system main generator trips were temporarily bypassed to support maintenance troubleshooting activities.

REASON FOR CHANGE: To support maintenance troubleshooting of problems with the primary water system tank level circuits.

SAFETY EVALUATION: The bypassing of primary water generator trips could not initiate any action or event that would increase the probability of a main generator trip. The non-safety related main generator is not used in mitigating the radiological consequences of an accident. The bypassing of primary water system generator trips will only affect the performance of the generator trip system and not affect any safety systems or limits as described in the FSAR.

SKASN: PLS-91-002

DOC NO: CR-PLS-91-001

DESCRIPTION OF CHANGE: This change provides for the appointment of the Coordinator, Operations Staff Support as PSRC chairman instead of the Manager, Plant Support.

REASON FOR CHANGE: This UFSAR revision was made to reflect the new PSRC chairman.

SAFETY EVALUATION: These changes are administrative in nature only. Technical Specification PSRC membership requirements are maintained. The qualifications and experience requirements for the PSRC chairman will remain unchanged. This change has no bearing on the probability of occurrence of an accident and has no effect on plant design or operation of the plant. The margin of safety as defined in the bases for any technical specification has not been reduced.

SRASN: PLS-91-003

DOC NO: TCN 91 to SOI-04-1-01-E12-1
Rev. 46

DESCRIPTION OF CHANGE: This procedure change provides for stop check valves 1E12F103A&B and F104A&B to be changed from the "handwheel open" position to the "handwheel closed" position. The purpose of these valves is to provide vacuum relief for the Steam Condensing mode of RHR system operation and to provide containment isolation with a closed system outside containment for Penetrations 48 and 77.

REASON FOR CHANGE: The "as tested" configuration for 1E12F103A&B and 1E12F104A&B per specifications is in the reverse direction with the handwheel in the closed position. This gives added confidence to the isolation capabilities of the subject valves.

SAFETY EVALUATION: The position of these valves will have no effect on the Shutdown Cooling mode, LPCI mode, CTMT Spray mode, or Suppression Pool Cooling mode of the RHR system. These are the only safety modes of the RHR system. Closing of these valves will only effect the Steam Condensing mode of the RHR/RCIC systems which per commitments is not currently licensed to be used at Grand Gulf. By placing these valves in the handwheel closed position on a permanent basis, they will be put in their required position to protect primary containment integrity. In addition to ensuring containment isolation at Penetrations 48 and 77, added insurance will be obtained that the closed system integrity backing up the single isolation valve for Penetration 75 will be maintained. This configuration will ensure the "as described" design intent for Penetration 75 is met by tested components. Therefore the margin of safety as defined in the technical specifications is not reduced.

SRASN: PLS-91-004

DOC NO: W.O. #41544

DESCRIPTION OF CHANGE: Special instructions to the subject work order (WO) include temporary removal of design seismic restraints for the normal storage configuration of the dryer/separator strongback and the drywell head lifting frame (herein referred to as a strongback also). The two strongbacks will be moved from their normal storage location and placed on temporary cribbing on the concrete slab due north of the reactor cavity on El. 208'-10". Temporary seismic restraints will be installed and a temporary tent or portable building will be erected around both strongbacks to contain airborne contaminants.

REASON FOR CHANGE: This activity is necessary to accomplish preventive maintenance required per GGNS heavy loads commitments prior to each fifth refueling outage for all "Special Lifting Devices". The removal of existing seismic restraints and installation of temporary restraints for the duration of the activity represents a change to the facility as described in the UFSAR.

SAFETY EVALUATION: There are no UFSAR accidents in which the probability of occurrence is related in any way to the seismic storage of the subject strongbacks in any plant operational mode. Any of the UFSAR evaluated accidents could be seriously complicated by load drop consequences if either (or both) of the affected strongbacks were postulated to fall into the upper containment pool or down the containment hatchway to the suppression pool below. However, the UFSAR does not address consequences of such load drops concurrently with any of the UFSAR accidents because both strongbacks are adequately restrained by design during normal storage on El. 208'-10" of the containment for all applicable loading conditions in all plant operational modes. This temporary storage of the subject strongbacks will be likewise restrained adequately by use of bolting and shackling to existing seismic lugs intended for normal seismic storage of the drywell head strongback and the containment dome access lift (CDAL). Thus the consequences of a previously evaluated UFSAR accident is not increased. Also, no credible possibility of an accident of a different type than previously evaluated is created. None of the plant equipment important to safety is affected by this temporary storage configuration. Since the intent of these temporary restraints is identical to the normal restraints, the consequences of equipment malfunctions in the UFSAR are not increased. The margin of safety of all technical specifications is maintained because the subject strongbacks will be restrained for all applicable loading conditions in all plant operational modes and no technical specification is adversely affected.

SRASN: PLS-91-005

DOC NO: Temp Alt 91-0007

DESCRIPTION OF CHANGE: This temporary change is for the removal of the conductivity element and the installation of a threaded plug in its place in the discharge header of the condensate pumps.

REASON FOR CHANGE: The replacement parts are not available for the broken conductivity element and the threaded plug will prevent leakage until the element is replaced.

SAFETY EVALUATION: The removal of the conductivity element will cause the continuous readout for the "Condensate Pump Discharge Conductivity" to be inoperable. No requirements are specified in the technical specifications for continuous monitoring of the condensate pump discharge conductivity. This will not affect the operation of the Condensate system or the ability to monitor the conductivity at this point in the system. Chemistry will obtain grab samples to monitor the condensate pump discharge conductivity as part of their normal monitoring program. This change does not increase the probability of occurrence of an accident previously evaluated in the UFSAR. The Condensate system provides no safety functions and failure of the system will not compromise the plant's ability to shutdown safely. This change does not create the possibility of an accident of different type than evaluated in the UFSAR. Also, this change does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR. This change does not reduce the margin of safety as defined in the bases for any technical specification.

SRASN: PLS-91-006

DOC NO: W.O. 43886

DESCRIPTION OF CHANGE: This change provided for the installation of a garlock/stainless steel backed temporary plug in a Component Cooling Water (CCW) pressure relief valve on the recirculation pump monitor.

REASON FOR CHANGE: This change was made to prevent valve leakage.

SAFETY EVALUATION: The plugging of a CCW relief valve's exhaust line in this portion of the system will not affect or degrade the operational capacity of the system. All other relief valves in the affected part of the system will remain unisolated and thereby provide a path for over pressurization. The setpoint of all remaining relief valves are the same and a sufficient level of protection will be provided. Therefore, this change will not increase the probability of occurrence of an accident previously evaluated in the UFSAR. The failure of the affected system will not compromise any safety related system or component and will not prevent reactor shutdown. No new failure modes are created by this work. The possibility of an accident of a different type than already evaluated by the UFSAR is not created. The piping for the CCW system is routed such that a pipe break will not flood or damage any safety related equipment thus, the plugging of this relief valve's exhaust line will not increase the consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR. The plugging of a CCW relief valve's exhaust line on the recirculation pumps will not change the function or operation as defined by the bases of the technical specifications, therefore, the margin of safety is not reduced.

SRASN: PLS-91-007

DOC NO: Temp Alt 91-0012

DESCRIPTION OF CHANGE: This temporary change defeats the rotor temperature interlock in the trip circuit for circulation water pump N71C001A. This interlock will be defeated by lifting a wire from the normally open contacts of the temperature monitor.

REASON FOR CHANGE: Defeating this interlock prevents spurious motor thermal trips during the first thirty seconds after a pump start command is initiated.

SAFETY EVALUATION: This change does not increase the probability of occurrence of an accident previously evaluated in the UFSAR. This trip interlock only affects the operation of the pump during the first thirty seconds of run time. After the thirty seconds, this trip function could be initiated at any time and the pump would remain in operation. Losing a circulating water pump, either with one pump running or none running, during the first thirty seconds would not increase the possibility of a loss of vacuum accident as discussed in the UFSAR. Other trip functions remain unchanged. This change does not increase the consequences of an accident previously evaluated in the UFSAR. The possibility of losing the pump after thirty seconds remains unchanged as would be the consequences of the loss of vacuum accident specified in the UFSAR. This change does not create the possibility of an accident of a different type than evaluated in the UFSAR. Loss of a circulating water pump affects only the plant's ability to condense steam and maintain a suitable vacuum in the condenser.

This change does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR. The circulating water pumps perform no function related to the safe shutdown of this plant. Defeating this trip function will have no affect on any equipment important to safety. The rotor temperature monitor trip only affects a circulating water pump which has no margin of safety specified in the technical specifications.

SRASN: PLS-91-008

DOC NO: CR-PLS-91-004

DESCRIPTION OF CHANGE: This change updates the UFSAR to reflect current company policy regarding prenatal exposure.

REASON FOR CHANGE: A change in company policy was brought about by the recent Supreme Court opinion in review of United Auto Workers, et.al. vs. Johnson Controls, Inc. FSAR Appendix 3A states that GGN3 complies with Regulatory Guide 8.13, Rev. 1, November 1975. However, the NRC published Regulatory Guide 8.13, Rev. 2 in December 1987. Revision 2 states that a prenatal program will be voluntary. New company policy reflects the views of the recent Supreme Court opinion and Regulatory Guide 8.13 Rev. 2.

SAFETY EVALUATION: This change is an administrative change and does not affect plant safety or plant equipment.

SRASN: PLS-91-009

DOC NO: TSTI-1P47-91-007-0-N

DESCRIPTION OF CHANGE: This change installs valves, pumps, and piping to allow injection of sodium hypochlorite and additional dispersant to the Plant Service Water (PSW).

REASON FOR CHANGE: This change was made for the control of biological fouling.

SAFETY EVALUATION: Chlorination of PSW/Ranney Wells is addressed as a part of original plant design at a chlorine residual of 0.5 ppm; this activity raises the residual level to 1.5 ppm. Onsite testing using PSW and test heat exchangers determined corrosion rates for carbon steel, stainless steel, and 90/10 copper/nickel piping. The use of sodium hypochlorite did not increase corrosion rates for the three metallurgies above the rates for untreated PSW. Based on a review of literature copper alloy 122 (drywell chiller exchanger tubes) is not expected to show any adverse effects from these residuals. Copper alloy 122 test coupons will be used during this activity to monitor corrosion rates. This activity does not change the control or response of the PSW system except for cooling tower makeup/level control, which will be controlled using blowdown. These systems and their operation are not involved in any accident evaluations in the UFSAR. This activity will not increase the probability of an accident previously evaluated in the UFSAR.

The PSW/Ranney Well systems have no safety related function to mitigate the consequences of an accident. However, some PSW valves serve as part of the secondary containment boundary and as PSW/SSW (Standby Service Water) crosstie isolations. The onsite testing demonstrated these valves would not be adversely affected by these residuals. These components will continue to perform their designated functions. The addition of chlorinated PSW to SSW will not adversely affect SSW water quality which is routinely chlorinated to a higher residual chlorine level. The addition of chlorinated water to the system storage tanks or use in the fire protection system will have no adverse affect on system operation. No increase in the consequences of an accident previously evaluated in the UFSAR will occur.

Chlorination was addressed in the original plant design using liquid sodium hypochlorite. No chlorine gas will be generated during this activity even in the event of a sodium hypochlorite spill. Sodium hypochlorite will be fed from 55 gallon drums at the rate of approximately one drum per day.

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Approximately a one week supply will be stored at the warehouse and reordered as necessary. No new hazard to control room habitability is introduced by the use of sodium hypochlorite onsite as documented in Bechtel Calculations which state that sodium hypochlorite has no OSHA established threshold level value. Sodium hypochlorite is non-flammable. Operation of the PSW/Ranney Well system is unaffected except for tower level control which will be controlled using blowdown. Level perturbations in the tower basin would not affect the ability to safely shut down the plant. Affected components will function as designed. This activity does not create the possibility of an accident of a different type than any evaluated in the UFSAR. The probability of occurrence of a malfunction of equipment important to safety previously evaluated in the UFSAR will not be increased.

No change to the basis concerning chlorine detection is required. Reactor water chemistry including chlorides will not be affected by this activity. No significant increase in chlorine levels in circulating water which might affect the hotwell in the event of a tube leak will occur as a result of PSW chlorination. Structural integrity and response times of valves which are a part of the secondary containment boundary will not be affected. The ability of the SSW system to remove heat and system makeup will not be altered. This activity does not affect the operability or availability of the fire suppression system. This activity does not reduce the margin of safety as defined in the bases for any technical specification.

SRASN: PLS-91-010

DOC NO: EER-91-6258

DESCRIPTION OF CHANGE: Valves Q1P81F056 and Q1P81F057, valves in the HPCS Diesel Generator Starting Air System, will be left open during normal operations. Plant procedures specify the closed position for these valves during normal operation. These valves connect receivers Q1P81A004A and Q1P81A004B and Q1P81A003A and Q1P81A003B, respectively.

REASON FOR CHANGE: The existing valve line-up requires the Q1P81F056 and Q1P81F057 valves to be in the closed position. Opening these valves during normal operations will permit the motor driven air compressor to start automatically due to low air pressure in any receiver. Closing these valves provides additional, but unnecessary, system redundancy and prevents proper compressor operation.

SAFETY EVALUATION: This safety evaluation concluded that opening the Q1P81F056 and Q1P81F057 valves does not represent an unreviewed safety question or change the GGNS technical specifications. The safety evaluation addressed the potential for new and increased failures and determined that opening the Q1P81F056 and Q1P81F057 valves does not potentially add to or worsen previously evaluated failures or events. Opening valves P81F056 and P81F057 does not change GGNS technical specifications or UFSAR.

SRASN: PLS-91-011

DOC NO: Temp Alt-91-0015

DESCRIPTION OF CHANGE: This temporary alteration increases the close setpoints of temperature switches 1P81N044A and 1P81N044B for the jacket water system on the HPCS Diesel Generator from 125°F to 130°F until implementation of permanent changes in RFO5.

REASON FOR CHANGE: The close setpoint for jacket water heater temperature switches 1P81N044A&B is 125°F. Temperature switches P81N006A&B, that provide temperature alarm annunciation, have a low alarm setpoint of 95°F. A large water temperature contrast exists during standby periods between P81N044A&B and P81N006A&B due to physical distance between their respective mounting locations. Nuisance alarms occur because water temperature drops below the low alarm setpoint for P81N006A&B before P81N044A&B reset and energize the jacket water heaters. This change eliminates nuisance alarms by energizing the jacket water heaters at a higher temperature, maintaining the jacket water temperature above the low alarm setpoint for P81N006A&B temperature switches.

SAFETY EVALUATION: This safety evaluation concluded that raising temperature switches 1P81N044A&B close setpoints from 125°F to 130°F does not represent an unreviewed safety question or change the GGNS technical specifications. The safety evaluation addressed the potential for new and increased failures and determined that raising temperature switches 1P81N044A&B close setpoints from 125°F to 130°F does not add to or worsen previously evaluated failures or events. Temporary Alteration 91/0015 changes the close setpoint for PS-44A and PS-44B listed in the UFSAR. The open setpoint for PS-44A and PS-44B is not altered by the temporary alteration and will remain at its design setpoint of 155°F.

SRASN: PLS-91-012

DOC NO: TSTI-1W20-91-001-0-N

DESCRIPTION OF CHANGE: This Technical Special Test Instruction (TSTI) addresses chemical cleaning of the Circulating Water System Cooling Tower fill medium.

REASON FOR CHANGE: The cooling tower fill medium has become partially plugged due to biological fouling. Plugging of the fill prevents proper heat transfer across the cooling tower and is degrading plant efficiency. Chemical cleaning will help eliminate this plugging and improve plant efficiency.

SAFETY EVALUATION: Cleaning is accomplished per the TSTI using hydrogen peroxide at 50% concentration. Hydrogen peroxide is injected into each cooling tower flume, where it is equally dispersed across the fill medium by the normal circulating water flow.

The hydrogen peroxide cleaning is performed in a minimum of 6 phases. Results of the first phase is evaluated to determine effects and effectiveness of the cleaning prior to proceeding to the next phase. The cleaning process is controlled to minimize the impact of solids released from the cooling tower to the circulating water system.

This cleaning is performed with both circulating water pumps in service and can be done in Operational Modes 1, 2, 3, 4, and 5.

No change is required to the normal operation of the circulating water system to perform this cleaning. However, additional precautions are implemented to ensure there are no adverse effects due to the solids released from the fill.

The hydrogen peroxide had been evaluated for compatibility with materials of construction in the circulating water system. This evaluation concluded no adverse effects would be incurred to the materials or components of the circulating water system at the specified maximum feed rates and concentrations. No unreviewed safety or environmental questions were identified as a result of this safety evaluation.

SRASN: PLS-91-013

DGC NO: Temp Alt-91-003

DESCRIPTION OF CHANGE: This temporary alteration provides for changes to the sulfuric acid storage and transfer subsystem within the Makeup Water Treatment system. These changes:

- Provide an additional drain path for sulfuric acid during transfer from vendor tanker to permanent plant storage tanks
- Improve depressurization of the vendor's tanker through the new drain path
- Add new piping and valves, consistent with the design criteria stated in the UFSAR, to provide the new drain path
- Utilize the existing reinforced concrete dike for collection and neutralization of accidental acid spills
- Provide double isolation drain valves to prevent accidental acid draining during acid transfer

REASON FOR CHANGE: The changes contained in this temporary alteration are being made to enhance personnel safety during acid transfer.

SAFETY EVALUATION: The changes do not affect the operation or diminish the quality of the Makeup Water system. The temporary alteration does not affect the environmental plan because the new drain points use the existing dike for spill containment and neutralization. The changes contained in the temporary alteration lessen the potential for accidental discharge of sulfuric acid to the environment without accompanying neutralization. No unresolved safety questions have been identified and the margin of safety has not been reduced as defined in any bases of the technical specifications.

SRASN: PLS-91-014

DOC NO: CPCON 1, 2 or 3/TS Act 21
of TS 3.3.2

DESCRIPTION OF CHANGE: This safety evaluation documents the analysis of entry into Operational Conditions 1, 2, or 3 when the Containment and Drywell Ventilation Exhaust Radiation - High High instrumentation is inoperable and the plant is in compliance with Action 21 of Technical Specification (TS) Table 3.3.2.1.

REASON FOR CHANGE: The Containment and Drywell Ventilation Exhaust Radiation - High High instrumentation will be inoperable when it is desired to change operational conditions.

SAFETY EVALUATION: The Containment and Drywell Ventilation Exhaust Radiation - High High instrumentation is designed to provide input to primary containment isolation. Primary containment isolation provides protection against the release of radioactive materials to the environment as a result of accidents occurring to the nuclear boiler system, auxiliary systems and support systems. This protection is afforded by automatic isolation of the appropriate lines which penetrate the drywell and containment. The trip function provided by this particular instrumentation is the closure of valves in the Containment and Drywell Purge System and the Combustible Gas Control System. Containment integrity is assured and there is no increase in the probability of occurrence of an accident previously evaluated in the UFSAR.

The UFSAR considers accidents which may potentially result in a radioactive release. The release is minimized through appropriate isolation functions which detect high radiation in the ventilation exhaust. Since the isolation function will be assured by manual action, prior to entry into the OPCON requiring the isolation function, containment isolation will be provided. The associated safety function of the isolated systems will be preserved by the operability requirements of their respective technical specifications. Therefore, this application of TS 3.0.4 will not increase the consequences of any accident analyzed in the UFSAR. The application of TS 3.0.4 does not increase the probability of the malfunction of equipment important to safety. There is no increase in the consequences of a malfunction of equipment important to safety previously evaluated in the UFSAR.

The bases for Technical Specification 3/4.3.2 states that this specification ensures the effectiveness of the instrumentation used to mitigate the consequences of accidents by preserving the operability trip setpoints and response times for isolation of the reactor systems. By having the valves manually closed and red tagged, the safety function of the subject instrumentation will be assured and the margin of safety as defined in the bases will not be reduced.

SRASN: PLS-91-015

DOC NO: SI Co W.O. 30542

DESCRIPTION OF CHANGE: This change is for the chemical cleaning of the Alternate Decay Heat Removal System (ADHRS) air conditioning (A/C unit 1T41B014 and of the ADHRS Heat Exchangers 1E12B003A and 1E12B003B.

REASON FOR CHANGE: Chemical cleaning is periodically required to remove buildup of deposits on the tubes interior surfaces. Removal of these deposits is necessary to ensure optimum heat removal and design flow through these heat exchangers.

SAFETY EVALUATION: The corrosion rates identified by the testing are insignificant. Since the total number of acid flushes is limited to 25, chemical cleaning of the ADHRS heat exchangers and the A/C ADHRS unit will not adversely affect the operability of these components nor compromise the structural integrity of the piping to these components. As a result, chemical cleaning of these components will not increase the probability of an accident previously evaluated in the UFSAR. Chemical cleaning of the Plant Service Water (PSW) side of ADHRS does not increase the consequences of an accident previously evaluated in the UFSAR.

ADHRS is completely isolated during the chemical cleaning process. There are no hazards from high energy line breaks nor from the spray effects of pipe cracks to other plant systems during the cleaning process. Hence, the possibility of an accident of a different type than evaluated in the UFSAR is not created during the chemical process. Chemical cleaning the ADHRS does not increase the probability of occurrence of a malfunction of equipment important to safety.

Since the amount of metal loss from the ADHR System ASME Class III piping and safety related components will be insignificant, the structural integrity of the ADHRS will not be compromised. It follows that the chemical cleaning process does not reduce the margin of safety as defined in the bases for any technical specification.

SRASN: PLS-91-016

DOC NO: 04-1-01-E12-1

DESCRIPTION OF CHANGE: System Operating Instruction (SOI) 04-1-01-E12-1, "Residual Heat Removal System" provides instructions for filling/venting, flushing, warming and operating Loops A and B in the shutdown cooling mode. Instructions for filling/venting, flushing and operating Loops A and B are relatively the same. However, instructions for warming Loop A require the flowpath to include the Residual Heat Reduction (RHR) heat exchangers whereas the Loop B instructions bypass the heat exchangers during the warming process.

It is proposed to modify the description of operating of shutdown cooling in FSAR Section 5.4.7.2.6.a and revise SOI 04-1-01-E12-1 to modify the lineup for the A loop to allow bypassing the heat exchangers during the warming procedure.

REASON FOR CHANGE: FSAR Section 5.4.7.2.6.a describes operation of the RHR system in the shutdown cooling mode. Specifically, this FSAR section states that the system will be flushed via valves F040 and F049 to radwaste. It also states that the system will be warmed with flow through the heat exchangers and discharged to radwaste through the same valves. This conflicts with the physical design arrangement of the system on the B side. No reference is made to the design differences between Loops A and B in this section of the FSAR.

SAFETY EVALUATION: The manual for the RHR heat exchanger (83820) does not require pre-warming of the RHR heat exchanger but cautions to start operation gradually to prevent hot fluid from being suddenly admitted to the heat exchangers when they are empty or cold. Shutdown cooling operation is begun by first opening the F048 bypass around the heat exchangers. After pump start, the F003 valve is slowly jogged opened which results in gradual admission of the reactor coolant while a normal cooldown rate for the reactor is being established.

This change to the shutdown cooling warmup instruction will not increase the probability of occurrence of a malfunction of equipment important to safety. GCNS's current method of slowly opening the F003 (heat exchanger outlet valve) adequately limits the sudden introduction of hot fluid to the heat exchanger in conformance with the RHR heat exchanger manual. These heat exchangers are designed to withstand the introduction of steam at 50 psig during steam condensing mode. The thermal conditions experienced with GCNS's current method of introducing fluid to these heat exchangers during shutdown cooling is much smaller in magnitude than that of the steam condensing mode. Therefore, the structural integrity of the heat exchangers will not be compromised with the implementation of the change to the SOI. There is no degradation of the ability of the RHR system to perform its safety function and therefore, no reduction in the margin of safety.

SRASN: PLS-91-017

DOC NO: CR-PLS-91-006

DESCRIPTION OF CHANGE: This change modifies UFSAR Table 6.2-49 as follows:

1. It adds the Horizontal Fuel Transfer System (HFTS) tube bellows assembly to the table for Penetration 4.
2. It makes administrative changes to the arrangement of the barrier listings for the containment personnel air locks, Penetrations 2 and 3.
3. It adds the equalizing valves for the outboard end walls on the containment personnel air locks. These valves apparently were inadvertently omitted from the listing at some time in the past.
4. It adds a descriptive adjective to clarify that spare penetrations have caps welded to them.
5. It deletes references to Notes 6, 7, 11, 21 and 22 for valves 1E12-F103B and 1E12-F104B (Penetration 48) and for valves 1E12-F103A and 1E12-F104A (Penetration 77). Notes 6, 7, 11, 21 and 22 are not applicable to these valves because they could be exposed to air through Penetration 75. Penetration 75 is the exhaust vacuum breaker for the Reactor Core Isolation Cooling (RCIC) Pump Turbine. The effect of this change is to require these valves to be tested with (pneumatic test), instead of receiving a local leak rate test of the system with water (system hydrostatic test).
6. It adds reference to Note 3 for valves 1E12-F103B and 1E12-F104B (Penetration 48) and for valves 1E12-F103A and 1E12-F104A (Penetration 77). These valves cannot be leak rate tested in the correct direction without installing a plug in the relief valve discharge pipe in the suppression pool.
7. It deletes the test connection valves on the guard pipe inspection ports from the listing.
8. It revises Note 1 to include the double inflatable seals on the containment personnel air locks. These seals are neither O-ring seals nor gasket seals, even though Note 1, which is referenced by Penetrations 2 and 3 listings, covered only O-ring seals and gaskets.
9. It adds a new Note 5 to describe the HFTS tube bellows assembly and its testing method.
10. It revises Note 12, based on evaluation of Pratt butterfly valves.

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11. It deletes Note 21, which is not applicable to valves 1E12-F103A&B and 1E12-F104A&B, as noted in Change 5 above.
12. It makes minor editorial changes in the test type column for consistency.

REASON FOR CHANGE: To update UFSAR Table 6.2-49.

SAFETY EVALUATION: The Appendix J leakage testing requirements are intended only to minimize leakage of radioactivity from the containment during and following an accident. None of these changes nor the underlying Appendix J testing requirements affect the probability that an accident will occur. The changes do not affect the physical design or operational condition of any plant components or systems.

The response of the plant and its equipment to an accident requiring containment isolation is based on meeting the design and testing requirements in regulatory documents such as 10CFR50, Appendices A and J.

Changes 2, 4 and 8 through 12 make administrative changes only. They do not change any testing requirements or affect the physical design or operational condition of any components that are tested. Therefore, these changes do not affect the consequences of an accident previously evaluated in the FSAR.

Change 1 adds the HFTS tube bellows assembly to the list of components to be tested. If the testing detects leakage and triggers repairs to reduce the leakage, this change could actually decrease the consequences of an accident by reducing the probability of containment leakage.

Change 3 adds the equalizing valves on the outboard end walls of the containment personnel air locks to the list of components to be tested. This change is actually an administrative change because the equalizing valves on both the inboard and outboard end walls of the air locks have been leak rate tested per Appendix J since the plant was originally started up. This change does not affect the physical design or operational condition of the air locks or their components. Therefore, this change does not affect the consequences of an accident evaluated in the FSAR.

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Changes 5 and 6 change the requirements for leak rate testing valves 1E12-F103B and 1E12-F104B (Penetration 48) and 1E12-F103A and 1E12-F104A (Penetration 77). The local leak rate test previously performed on these valves along with other system valves with water (system hydrostatic test) will be replaced by a reverse local leak rate test with air (pneumatic test). If testing these valves with air rather than water detects leakage and triggers repairs to reduce the leakage, this change will actually decrease the consequences of an accident by reducing the probability of containment leakage.

Change 7 deletes test connection valves on the guard pipe inspection ports from the listing of components to be tested. The leakage through these valves has been considered in loss of containment integrity accidents that have already been analyzed in the FSAR. Change 7 does not physically add, modify or delete any component required to be leak rate tested.

The test connection pipe and valves are sized according to Regulatory Guide 1.11 (Safety Guide 11) to minimize the leakage from any break in the pipe or valves. Regulatory Guide 1.11 requires that flow restrictions in instrument lines be sized to reduce leakage through the restrictions to the minimum practical amount. The test connection orifices in the outer covers of each inspection port are limited to 1/8-inch diameter.

Therefore, Change 7 does not increase the consequences of an accident previously evaluated in the FSAR and does not reduce the margins of safety defined in the bases for Tech Specs 3/4.6.1.1 and 3/4.6.1.2.

SRASN: PLS-91-018

DOC NO: CR-PLS-91-007

DESCRIPTION OF CHANGE: This safety evaluation provided for changes to the organizational reporting structure of the Radiation Control department.

REASON FOR CHANGE: All of the changes are administrative in nature, reflecting organizational changes or providing minor clarifications in the descriptions of Health Physics programs.

SAFETY EVALUATION: All duties performed by Radiation Control personnel will continue to be performed in the event of an accident.

These changes do not create the possibility of an accident of a different type than any evaluated in the FSAR. The changes in positions and responsibilities do not in any way lessen the effectiveness of the Radiation Protection program.

These changes do not increase the consequences of a malfunction of equipment important to safety previously evaluated in the FSAR, nor do they create the possibility of a malfunction of a different type than any evaluated previously in the FSAR. All of the proposed changes are administrative in nature, reflecting organizational changes or providing minor clarifications in the descriptions of Health Physics programs. The level of oversight provided to the Radiation Control program has not been decreased by these changes.

These changes do not reduce the margin of safety as defined in the basis for any technical specification. The changes have no effect on the limiting conditions for operation, applicability, action or surveillance requirements as defined in any technical specifications.

SRASN: PLS-91-019

DOC NO: W.O. 53587

DESCRIPTION OF CHANGE: This work package installed temporary fuses to isolate and troubleshoot a fault in the Reactor Water Cleanup (RWCU) circuit.

REASON FOR CHANGE: This change is intended to aid in the location and correction of an electrical fault which is causing frequent loss of the 'A' Reactor Water Cleanup (RWCU) filter demineralizers (F/D's).

SAFETY EVALUATION: Installation of the temporary alteration will not introduce any new failure mechanisms into the RWCU F/D system. This change is intended to aid in the location and correction of an electrical fault which is causing frequent loss of the 'A' RWCU F/D. This change could not initiate any action or event that could affect an accident previously evaluated in the SAR.

The installation will not increase the consequences of the failures that have or can occur in this electrical circuit. The fuses to be installed will serve to limit the impact of a short on the portion of the RWCU system affected.

A loss of the 'A' RWCU F/D during installation and removal of the Temp Alt will not challenge TS chemistry limits. No adverse effects are possible (with respect to safety).

SRASN: PLS-91-020

DOC NO: CR-PLS-91-010

DESCRIPTION OF CHANGE: The subject of this FSAR change request was to accurately describe the test configuration of the high pressure core spray (HPCS) system while performing surveillance activities in accordance with GGNS Technical Specifications 3.5.1.c and 4.5.1.c.1.

REASON FOR CHANGE: The incomplete content of the FSAR was realized as part of safety system functional assessments performed in 1991. The FSAR stated that the periodic test was performed using condensate storage tank water. This contradicted the surveillance procedure which used the suppression pool flow path.

SAFETY EVALUATION: Functional testing of the HPCS pump is mandatory per existing Technical Specifications. HPCS is designed to be tested via the condensate storage tank (CST) flow path or via the suppression pool flow path. The present testing configuration utilizes the suppression pool flow path. No new failure mechanism will be introduced to the system or any component as a consequence of the UFSAR change.

Proper testing of the HPCS pump in the proposed configuration does not impose undue stress on its safety related equipment. Improper performance of testing can result in water hammer events which can potentially impact operation of the HPCS system. However, such events can occur with the previous lineup to the condensate storage tank as well. The discharge piping is maintained full and administrative controls are in place to minimize occurrence of such events.

Neither the performance of the HPCS pump functional test nor the resultant HPCS system configuration adversely impact operation or standby condition of the HPCS system. The safety related function of HPCS is not impeded by the test configuration. The system configuration during pump testing is aligned to the suppression pool which is a normal source of water for HPCS operation during emergency events.

No new failure mechanism will be introduced to the system or any component as a consequence of the UFSAR change. Considerations for dynamic effects of test return line rupture would not be any different than that performed previously.

HPCS system configuration during the HPCS pump test does not adversely impact the operation or standby condition of the HPCS system. The most limiting break size and location of reactor coolant pressure boundary (RCPB) analyses are not impacted by the proposed change. HPCS system is a redundant emergency core cooling system (ECCS). GGNS satisfies the single failure criterion for ECCS.

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The margins of safety will not decrease due to the change. Neither the performance of the HPCS pump functional test nor the resultant HPCS system configuration adversely impact operation or standby condition of the HPCS system. With HPCS system inoperable, adequate core cooling is assured by redundant ECCS subsystems (i.e., LPCS, and ADS).

SRASN: PLS-91-021
PLS-91-022

DOC NO: BISULFITE ADDITION TO PSW

DESCRIPTION OF CHANGE: This change (PLS-91-021) allows injection of Sodium Bisulfite to the Plant Service Water system. This activity (PLS-91-022) installs tanks, valves, pumps and piping for this service.

REASON FOR CHANGE: Iron bacteria in the PSW is the most significant biofoulant at GGNS. Years of onsite experience have shown that during the summer months when PSW oxygen concentrations are <25 parts per billion, iron bacteria are easily and economically controlled by a non-oxidizing biocide. However, during the winter months when oxygen concentrations in Plant Service Water (PSW) exceed 100 ppb, iron bacteria control is marginal at best. The purpose of feeding a bisulfite oxygen scavenger is to keep oxygen levels at summertime lows, thus ensuring year-round iron bacteria control.

SAFETY EVALUATION: This activity does not change the control or response of the Plant Service Water system or the PSW Radial Well system. These systems and their operation are not involved in any accident cause evaluations in the UFSAR. This activity will not increase the probability of an accident previously mentioned in the UFSAR.

The Plant Service Water and PSW Radial Well systems have no safety related function to mitigate the causes of an accident (UFSAR Sections 9.2.8.3 and 9.2.10.3). However, some PSW valves serve as part of the secondary containment boundary and as PSW/SSW (Standby Service Water) cross-tie isolations. None of these valves would be adversely affected by SO_3 residuals at the 5 ppm or less dosage levels. Corrosion testing of carbon steel, type 304 stainless steel, and 90/10 cupronickel has shown that corrosion rates are either unaffected or actually reduced in the presence of bisulfite. Valves listed in Table 3.9-3C of the UFSAR as ASME Section III Code classes 2 and 3 which may be exposed to these SO_3 residuals will not be adversely affected. These components will continue to perform their designated functions.

The addition of PSW containing residual SO_3 to the Standby Service Water system will not adversely affect SSW water quality. The addition of PSW containing residual SO_3 to the Fire Protection system storage tanks for use in the Fire Protection system will have no adverse affect on system operation.

No increases in the consequences of an accident previously evaluated in the UFSAR will occur.

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The bisulfite is to be fed from portable storage bins, or from a bulk storage tank inside the berm at the PSW Chemical Injection Facility located in the parking lot. Feed rates are expected to range from 90 gallons per day (summer months) to 640 gallons per day (winter months). Portable storage bins may be stored at the warehouse and re-ordered as necessary. Bulk deliveries would be made directly to the bulk tank in the parking lot.

No SO_2 gas will be generated due to this activity, even in the event of a spill. No new hazard to control room habitability is introduced.

Sodium Bisulfite is non-flammable at ambient year-round temperatures. Its only reactivity is with strong oxidizing agents or mineral acids, none of which would be stored inside the parking lot berm.

Operation of the Plant Service Water and PSW Radial Well systems will be unaffected. System components will function as designed. This activity does not create the possibility of an accident of a different type than any evaluated in the UFSAR.

Sodium Bisulfite does not produce SO_2 gas. No basis concerning SO_2 detection is required. Reactor Water chemistry including sulfates (SO_4^{2-}) will not be affected by this activity. No significant increase in SO_4^{2-} levels in the Circulating Water system which might affect the hotwell in the event of a tube leak will occur as a result of this activity. Structural integrity and response time of valves which are a part of the secondary containment boundary will not be affected. The ability of the SSW system to remove heat and system makeup will not be altered. This activity does not affect the operability or availability of the fire suppression system. This activity does not reduce the margin of safety as defined in the bases of the technical specification.

SRASN: PLS-91-023

DOC NO: CR-PLS-91-009

DESCRIPTION OF CHANGE: This revision of the UFSAR clarifies implementation of RC 1.75 requirements via divisional separation and permits the implementation of separation requirements based on safety function.

REASON FOR CHANGE: Separation of equipment has been implemented at GGNS by a divisional means as imposed by design and construction specifications. This strategy was conservative in assuring compliance with RC 1.75 requirements.

SAFETY EVALUATION: Separation requirements for safety function equipment continue to be satisfied in compliance with RC 1.75. Redundant safety function equipment continues to satisfy single failure criteria. Instrumentation and control system installations comply with descriptions in UFSAR Section 7.1.2. No new or different type of failure mechanism is introduced to any component or system as a consequence of implementation of this UFSAR change. Divisional separation of engineered safety feature groups for Class 1E 120 volt instrumentation and power supply is maintained as described in Section 8.3.1 of NUREG-0831. The change clarifies implementation of existing criteria which address separation of redundant safety function equipment and systems. Implementation of separation criteria for safety function components at GGNS has been more conservative than required.

Safety function equipment of different divisions which performs or supports redundant safety function will continue to be separated in order to conform to industry standards and requirements. This will not create a common failure mode of redundant safety function equipment. As such, malfunctions of safety function equipment are bounded by existing analyses.

The margins of safety will not decrease due to the change. Operation and operability of redundant safety function will not be impacted by implementation of the change. Safe shutdown capability of the facility and mitigation and control of accident conditions within the facility will not be hampered due to implementation of the change.

SRASN: PLS-91-024

DOC NO: UFSAR 12.5.2.2.5.1.S1

DESCRIPTION OF CHANGE: This GGNS UFSAR change is issued to delete the reference to noble gas sampling by Health Physics Continuous Air Monitors (CAMs).

REASON FOR CHANGE: Three-channel CAMs provide no means of quantitative support for noble gas, iodine, or particulate analysis. Single-channel CAMs can be set up faster and provide the "beta, gamma" analysis specified in Table 12.5-1. Operationally, the single-channel units are superior in performance and reliability.

UFSAR Reference 12.5.2.2.5.1.S1 is being changed to: "CAMs will normally be utilized at GGNS to provide monitoring for particulate or iodine activity separately, and/or simultaneously." Besides achieving a more efficient and cost effective Health Physics continuous air monitoring program at GGNS, this change would further align Grand Gulf with other Entergy sites procedures and practices.

SAFETY EVALUATION: No accident evaluated in the SAR is based on the operation, malfunction, or failure of portable CAMs. They are used for qualitative trend information only.

Replacing portable three-channel CAMs with single-channel units will not introduce new accidents or the possibility of an accident of a different type than evaluated in the SAR.

These portable CAMs operate in remote locations with hoses routed to specific work areas. Safe and deliberate placement of these monitors decreases interaction with other equipment. Thus, replacing portable three-channel CAMs with single-channel units will not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR.

Portable CAMs are not required to mitigate the consequences of a malfunction of equipment important to safety. Installed airborne radioactivity monitoring instrumentation provides environment monitoring as specified in the SAR. Thus, replacing portable three-channel CAMs with single-channel units will not increase the consequences of a malfunction of equipment important to safety previously evaluated in the SAR.

Neither three-channel nor single-channel portable CAMs are addressed in the technical specifications. Their use is for qualitative trend information only and therefore does not affect the margin of safety defined in bases for any technical specification.

SRASN: PLS-91-075

DOC NO: GNRO-91/00167

DESCRIPTION OF CHANGE: In AECM-83/0465, Mississippi Power and Light stated that a signed agreement had been obtained with Oak Ridge National Laboratory (ORNL) to perform the offsite analyses. ORNL agreed to receive and perform analyses of Post Accident Samples (PASS) originating at Grand Gulf Nuclear Station (GGNS) in the event of GGNS experiencing at 1% or greater fuel failure.

This change is for the withdrawal of the commitment made in paragraph 4 of AECM-83/0465 to maintain an agreement with an offsite vendor for the performance of (PASS) analyses as a backup and verification to Grand Gulf's (GGNS) onsite PASS analysis program.

REASON FOR CHANGE: GGNS was notified in May 1987 that ORNL would no longer be able to provide this service as they were not allowed to duplicate services offered by a private industry source, Babcock and Wilcox (B&W). The agreement was forced to be terminated. GGNS then initiated a contract with B&W in August of 1987 for offsite PASS analysis services.

SAFETY EVALUATION: The PASS system is part of the Process Sampling System - Instrumentation and Controls, listed and described in Section 7.7.1.11.4.2 of the UFSAR. All of the plant systems described in UFSAR Section 7.7, including PASS, are Control Systems not Required for Safety. The UFSAR Section 7.7.1 states, "This subsection discusses instrumentation and controls of systems whose functions are not essential for the safety of the plant. . ." Operation of, and functions of, the process sampling system (including PASS) are not precursors of, nor used in mitigation of, an accident.

The PASS system and its operation, as described in the UFSAR, are unaffected by the withdrawal of this commitment. No credit for, nor mention of, an offsite PASS analysis program is included in the UFSAR.

PASS sampling and analyses are performed after a reactor accident to determine the extent of reactor core damage. This program is therefore an after-accident evolution and is evaluated to not contribute to nor cause an accident condition to occur.

Withdrawal of this commitment could result in fewer PASS samples needing to be drawn in an accident, possibly resulting in an enhanced reliability of the PASS panel through reduced use cycles and a potential reduction of the possibility of a spill and subsequent release of radioactive materials which could result from a malfunction of the PASS panel.

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Shipment of a PASS sample offsite would not be considered a radioactive release from a reactor accident nor have any effect on dose rates/exposure to the public following a reactor accident. Onsite PASS analyses would be performed with or without an offsite analysis program. Deletion of the requirement to ship a PASS sample to an offsite laboratory would not constitute any hazard or increased hazard of exposure or danger to the general public and could enhance public safety by preventing the shipment of a highly radioactive sample over public transportation routes.

The operation of the PASS system is unchanged by withdrawing the offsite analysis requirement. The resulting condition is exactly equivalent to that now existing in regard to effects to the plant and its operation. That is, no different effect will exist or occur. Analysis of PASS samples will be performed in GGNS's onsite laboratories exactly the same whether samples are shipped offsite or not. Laboratory sample analysis is not and does not constitute an initiator or precursor of any reactor accident.

The intent of the 1 E4 rad/gm in the test matrix in NUREG 0737, 11.B.3, was to test installed in-line process instrumentation. Per the GGNS UFSAR, the primary means of PASS sampling is grab sampling. All of the process instruments installed in the PASS panel and the in-line analyses they perform are, or can be, backed up or duplicated by grab sampling at GGNS. As backup analysis capability exists onsite for the in-line instrumentation in the PASS panel, the offsite PASS analysis program is not necessary.

The margin of safety as defined for any technical specification is unchanged. PASS is only addressed in the administrative controls section of GGNS's technical specifications in Section 6.3.8.c. This technical specification and its implementation will be unaffected. No other technical specifications will be affected. Operation of the PASS system will continue to be performed in accordance with the GGNS operating license, the commitments in the UFSAR and applicable station operating instructions. Technical specifications do not require, consider nor take credit for offsite analysis of PASS samples.

SRASN: PLS-91-026

DOC NO: W. O. 55233

DESCRIPTION OF CHANGE: This change provides work instructions to remove door 1M110 from its hinges and remove the door frame and correct door/frame problems. The work order also requires installation of sandbags across the full width of the door opening, 16 inches above floor level, before performing any work on the door or door frame. The work instructions require that sandbags remain in place until the door is returned to its design condition, with the Propable Maximum Precipitation seal intact.

REASON FOR CHANGE: Maintenance personnel cannot correct the condition without removing the door from its frame. Maintenance has exhausted other options for correcting door and frame problems.

SAFETY EVALUATION: The safety evaluation concluded that removing door 1M110 from the frame does not represent an unreviewed safety question or change GCNS technical specifications. The safety evaluation addressed the potential for new and increased failures and determined that the controls contained in Work Order 55233 adequately address flood protection requirements in the FSAR. Installing sandbags 16 inches above floor level across the entire width of the door opening will prevent entry of rainwater into the SSW "A" pump room during a PMP event. A sandbag height of 16 inches is well in excess of the 9-inch height requirement in the FSAR. Door 1M110 is not exposed to rain and is susceptible only to external flooding from accumulated rainwater at ground level. Consequently, removal of the door does not create new external flooding concerns from rain entering the open area created by door removal.

SRASN: PLS-91-027

DOC NO: W. O. 45949

DESCRIPTION OF CHANGE: The turbine/generator trip for low primary water tank level are to be bypassed during instrument monitoring.

REASON FOR CHANGE: This change is needed to ensure that a generator trip will not occur while troubleshooting primary water tank level instrumentation.

SAFETY EVALUATION: The main accident of concern when dealing with the turbine/generator is the generator load reject with failure of bypass flow. This event is categorized as an incident of moderate frequency. The low primary water tank level trip is used to protect the non-safety related generator from equipment damage. This change bypasses one of the generator trips and relies on the five system flow alarms/trips for protection. This change could not initiate any action or event that would increase the probability of a generator trip, therefore would not increase the probability of an accident as previously evaluated in the SAR.

This change only affects the generator and will not introduce a new mode of generator tripping/failure. The five flow trips described in SAR Section 10.2.2.5.1 presently used with the tank low level trip will supply adequate protection to the generator. The non-safety related generator will not cause any accidents of a different type than already evaluated in the SAR.

The result of this change would only affect the generator and no technical specification limits would be effected. This change will only effect system performance of the generator trip function and not effect any safety systems or limits as described in the SAR. Since this change will not effect the limits of any systems as described in the SAR then it will not reduce the margin of safety as defined in the basis for any technical specifications.

SRASN: NSP-91-001

DOC NO: NSAP SP-N-6, Rev. 7

DESCRIPTION OF CHANGE: Incorporated regional well monitoring from procedure NSAP 5.7 into procedure NSAP SP-N-6, and changed regional well monitoring frequency from bi-weekly to twice annually on UFSAR Table 2.4-29.

REASON FOR CHANGE: The monitoring frequency listed in UFSAR Table 2.4-29 came from the GGNS Construction Permit which was cancelled on August 21, 1991 (GNRI-91/00176), and monitoring frequency for regional wells as specified in UFSAR text 2.4.13 is required twice per year.

SAFETY EVALUATION: Change in the procedure NSAP SP-N-6, Revision 7, which incorporates regional well monitoring into the perched well monitoring procedure (due to cancellation of construction permit) does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the UFSAR, and does not create the possibility for an accident or malfunction of a different type than previously evaluated in the UFSAR, and does not reduce the margin of safety as defined in the basis for any technical specification; therefore, it does not involve an unreviewed safety question.

SRASN: NLS-91-001

DOC NO: CR-NI-91-023

DESCRIPTION OF CHANGE: The description of main generator hydrogen and carbon dioxide purging and filling before and following maintenance in the UFSAR is being changed. This change removes the requirement to disconnect the hydrogen supply piping from the main generator when hydrogen is being purged and removes the requirement to perform a leakage test after purging the hydrogen. This change also changes the required hydrogen concentration in the main generator following filling operations from 90% hydrogen in carbon dioxide to 98% hydrogen in air. This change performs no plant modifications.

REASON FOR CHANGE: Current FSAR description requires modification to allow for the removal of unnecessary requirements of removing the hydrogen supply piping during purging and performing a leakage test after purging the hydrogen from the main generator. Changing the required measured parameter from 90% hydrogen in carbon dioxide to 98% hydrogen in air allows the filling operation to be controlled on a more accurate scale which provides indication to the control room and insures hydrogen concentration is within its normal operation allowable value (> 95% hydrogen in air).

SAFETY EVALUATION: The proposed change does not modify any plant system/component. The purging and filling procedures described only affect the main generator and hydrogen and carbon dioxide systems. When the unit is shutdown and the turbine is not rotating or is being rotated by the turning gear, the only time the described procedures are performed, these systems are not important to safety.

The proposed change does not place combustibles in any new locations or increase the amount of combustibles present. These changes do not increase the probability of hydrogen in the generator igniting or hydrogen leaking from the system and resulting in a fire. The required hydrogen concentration of 98% hydrogen in air ensures that the hydrogen to air mixture is not at explosive levels while providing indication in the control room. Leaving the piping in place between the isolating valves and the main generator only affects the location the hydrogen is potentially released and does not affect the probability of the isolating valves not functioning properly. The potential release of hydrogen into the main generator instead of the turbine building increases the probability that any significant release would be detected since the hydrogen content in the generator is measured during the hydrogen purging with carbon dioxide.

Removing the requirement to perform a leakage test after purging the hydrogen from the generator with carbon dioxide does not increase the probability of a fire. Since, the generator is not opened until hydrogen levels are below flammable levels and a leakage test is performed prior to refilling the generator with hydrogen.

SRASN: NLS-91-002

DOC NO: CR-NL-91-020

DESCRIPTION OF CHANGE: This change performs no plant modifications. The change adds a description of Source Range Monitor (SRM) operation during refueling operations to the FSAR.

REASON FOR CHANGE: Technical specifications require two operable SRMs, one in the quadrant where core alterations are taking place and the other in an adjacent quadrant. BWRs typically, define a quadrant by arbitrarily assuming four 90 degree axis on a N-S-E-W orientation with one SRM located approximately in the center of each quadrant. Grand Gulf is unique in the number and layout of its SRMs. Grand Gulf has 6 SRMs instead of 4. Hence, this arrangement places the SRMs approximately 60 degrees apart. An SRM can be inoperable without comprising the original intent of the Grand Gulf design if the quadrants are not arbitrarily defined using the four major axis. By adding this change to the UFSAR allowing the flexibility of defining the four quadrants starting at any azimuth, the quadrants can be designated such that the two SRM operability requirement of TS 3.9.2b can be met with an SRM inoperable and still meet the design intent of maintaining adequate neutron monitoring during core alterations.

SAFETY EVALUATION: The SRMs are not assumed to operate to mitigate the consequences of any accident which is postulated to occur during the refueling operations described by this FSAR change. The location and number of operable SRMs described is in accordance with the current technical specifications and the associated basis as discussed in the GE basis review dated 10/03/90. This change does not affect the core's design to be subcritical at any time during its operating history with any one control rod fully withdrawn or affect the refueling interlocks which control fuel movement and control rod withdrawal. The restrictions on core alterations described by this change are consistent with the guidance provided in GE PRC 89-01 and RICSIL 039. The proposed change does not modify any plant system/component or affect the operating conditions of any plant system/component.

SRASN: NLS-91-003

DOC NO: CR-NL-91-6

DESCRIPTION OF CHANGE: The changes to the UFSAR consist of revisions to MP&L transmission line outage data. Information on outages for the period from June 1, 1990 to May 31, 1991 is being added to Chapter 8. The UFSAR change also includes a new MP&L map which reflects completion of certain 230kV transmission lines.

REASON FOR CHANGE: Statistics on the transmission line outage rate are updated based on the new data. In addition, data for previous years is corrected based on information received from MP&L.

SAFETY EVALUATION: The change is to statistical data only and does not constitute a physical change to the facility or to the operation of the facility. Therefore the change does not constitute an unreviewed safety question. A decrease in the overall performance of the 500kV system was realized (0.9% to 0.99 outages/year/100 miles). The 115kV transmission line has experienced an overall outage rate of 1.65 outages/year/100 miles compared to an overall rate of 1.79 currently in the UFSAR.

SRASN: NLS-91-004

DOC NO: Ops. Cond. 1, 2, 3, in
TS 3.6.6.2, Actions b
and/or c

DESCRIPTION OF CHANGE: This evaluation addresses the safety implications of entering OPERATIONAL CONDITIONS 1, 2, or 3 with secondary containment penetrations already isolated by an acceptable method as allowed by TS 3.6.6.2, Actions b and/or c as compared to taking these actions after entering OPERATIONAL CONDITIONS 1, 2, or 3.

REASON FOR CHANGE: Technical Specification 3.6.6.2 identifies operability requirements for secondary containment automatic isolation valves and dampers in OPERATIONAL CONDITIONS 1, 2, and 3 and at other times including during core alterations and when handling irradiated fuel in the primary or secondary containment. Various isolation valves and/or dampers may become inoperable due to maintenance, to surveillance tests and inspections, to implement design changes or for some other reason. TS 3.0.4 allows the plant to enter OPERATIONAL CONDITIONS 1, 2, or 3 without having all required isolation valves/dampers OPERABLE provided that the requirements of the applicable action statements are met.

SAFETY EVALUATION: The function of the secondary containment isolation valves and dampers is to isolate secondary containment penetrations when necessary. This function, along with that of the Standby Gas Treatment System (SGTS), ensures that secondary containment integrity is maintained when required. Secondary containment integrity assures that environmental releases of radioactive material are minimized, thereby preventing offsite doses from exceeding those determined by plant safety analyses.

During OPERATIONAL CONDITIONS 1, 2, and 3, all secondary containment isolation valves and dampers are required to be OPERABLE to mitigate radioactive releases which might occur. The UFSAR considers numerous events which may potentially result in a radioactive release during OPERATIONAL CONDITIONS 1, 2, or 3. These include LOCAs, failures of various plant systems and components and loss of offsite power.

Should isolation valves and/or dampers become inoperable during OPERATIONAL CONDITIONS 1, 2, or 3, Actions b and/or c may be entered to indefinitely provide an equivalent level of protection by isolating the affected secondary containment penetrations. Under TS 3.0.4, Action b and/or c will be taken prior to entering OPERATIONAL CONDITIONS 1, 2, or 3 for those penetrations with inoperable isolation valves or dampers.

Taking these actions at that time as compared to taking them afterwards does not impact any of the above considerations regarding the margin of safety. Since the isolation is already

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accomplished, the safety function of the isolation valves and dampers is fulfilled.

There are no changes to plant procedures, controls, or interlocks that could result in a larger release of material inside the primary or secondary containment than previously calculated.

Thus, the margins of safety are not reduced by the application of TS 3.0.4 as applied to TS 3.6.6.2.

SRASN: NLS-91-005

DOC NO: CR-NL-91-003

DESCRIPTION OF CHANGE: This change deletes the position of "Manager, Plant Support" and creates the position of "Manager, Materials, Purchasing and Contracts." In addition, this change reflects the creation of a corporate Materials, Purchasing and Contracts department and the associated transfer of responsibilities.

REASON FOR CHANGE: The new corporate organization will provide oversight, plant support and take advantage of synergies that exist between the three sites operated by Entergy Operations.

SAFETY EVALUATION: These changes are administrative in nature and have no effect on the assumptions of any accident analyses or on the design or operation of the plant.

The duties and responsibilities being performed in the previous organizational structure continue to be performed in the new organizational structure.

The specific site functions are maintained under the responsibility of the GGNS General Manager. The Manager, Plant Support is being deleted from the line of authority, responsibility and succession inside and outside the Control Room. There are no specific requirements for this position and it does not affect the minimum shift crew requirements of Technical Specification 6.2.2.

Therefore, there will be no increase in the probability of occurrence or consequences of accidents previously evaluated in the UFSAR; nor will there be any increase in the probability of occurrence or consequence of a malfunction of equipment important to safety previously evaluated in the UFSAR; nor will there be created the possibility of an accident or malfunction of equipment important to safety different than previously evaluated in the UFSAR. These changes are administrative and do not relate to or modify any safety margins identified in the basis for any technical specification.