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OF

FACILITY CHANGES, TESTS AND EXPERIMENTS

CONDUCTED WITHOUT PRIOR APPROVAL

AND

CHALLENGES TO THE PRIMARY AND SECONDARY SYSTEM

PORV'S AND SAFETY VALVES

IE24

GSM-1 ADDITION TO AUXILIARY BUILDING

A need has been identified for a standby auxiliary feedwater system at Ginna Station (GAI Report 1815). Because space for this equipment is not available in existing plant structures, the existing Auxiliary Building will be extended. The Auxiliary Building Addition as shown on GAI Layout Drawing D-0E-001 is a structure adjoining the south wall of the existing Auxiliary Building. For the purposes of this design criteria the Auxiliary Building Addition is considered to consist of two independent structures as follows:

a. Auxiliary Feedwater Pumphouse

The Pumphouse is a Seismic Class I concrete structure supported by caissons. The building is presently one story high, but will be designed to accommodate the addition of a second story at some future time. For the present design the second story is considered to be a light steel structure. The Pumphouse will contain major equipment such as a 10,000 gallon condensate storage tank and standby auxiliary feedwater pumps, etc.

b. Drum Storage Building (FUTURE)

The Drum Storage Building is a non-safety related steel frame structure supported by spread footings. The building is one story high and is located on the east side of the Pumphouse. The Drum Storage Building will contain the cement silo and new drum storage area. The footings will be designed to span excavation required to serve the electric lines that run under the new footings. The Drum Storage Building shall have an easily excavated floor, such as asphalt paving, to permit access to the buried electric line.

The Primary function of the Auxiliary Building Addition is to house and provide a suitable operating environment for the proposed standby Auxiliary Feedwater System. The function of the standby auxiliary feedwater system is to decrease the consequences of an accident, namely the consequences of a high energy break, which could conceivable damage the existing auxiliary feedwater

system in the Intermediate Building. During the construction of the foundation for the Auxiliary Building Addition, work must be performed in the vicinity of existing Class I utilities buried under the ground. These utilities consists of the two 20" diameter service water lines, the 115 kV electrical lines, and the electrical duct bank for off-site power and control cables. Of the above mentioned utilities, the only one that could conceivably be damaged during the construction of the Auxiliary Building Addition is the service water pipe. The 115 kV lines are enclosed in an oil static pipeline and are buried eight feet below grade and the electrical duct bank is under a concrete slab. In the case of the service water pipe, the reason the new redundant return line was installed before construction of the Auxiliary Building Addition is to provide redundancy in case the existing lines are damaged during construction. None of the above mentioned utilities will be exposed while heavy construction lifts are being made. In addition, the following safety precautions will be taken during caisson installation to protect the Class I utilities:

1. Temporary casings will be installed around the upper portion of the two caissons nearest the service water pipe thrust block and the caisson nearest the 115 kV line. These casings will be twisted into place to prevent loss of ground during installation. The casings in the caissons nearest the thrust block will be left in place.

2. The end of the service water thrust block has been coated in the field to assure that there is clearance between it and the caisson.

3. An elevation monitoring point has been established on the top of the service water thrust block to verify that no settlement takes place during construction.

4. The caisson installation specification calls for the use of equipment which will not cause excessive vibrations.

5. A monitoring point has been established for the new service water redundant return line at the Auxiliary Building wall to verify that settlement does not occur at that point.

6. The 115 kV line has been exposed and its location recorded to assure that there is adequate clearance between it and the nearest caisson.

7. Other less critical known utilities have been located and those that interfere with caisson construction have been relocated.

The building and equipment electrical grounding grid will be extended to include the Auxiliary Building Addition. Where construction interrupts this grid, a temporary connection will be made until the permanent connection has been made. The Auxiliary Building Addition is considered to be isolated from the existing building as far as fire hazard is concerned and any openings cut in the existing wall will be blocked with fire retarding material. A hose station will be established south of the building for construction fire protection. Fire extinguishers will also be placed at strategic locations as required by OSHA. During the construction of the Auxiliary Building Addition, precautions will be taken to assure that a crane does not swing into the existing Auxiliary Building. These precautions will consist of:

1. Safety Watch - A person knowledgeable about crane performance will supervise the crane operations and check lifting capacities, swing, position, etc.

2. Operator Indoctrination - Operators will be advised of the existing plant conditions and the critical nature of their work.

3. Safety Features of Cranes - Special attention will be given to assure that contractor cranes meet OSHA requirements, for example: cable condition, posted load chart in cab, boom angle indicator, etc.

4. Crane Position - Whenever possible, cranes will be positioned at an angle to the existing building which would put the boom somewhat parallel to the existing building during lifting and no loads will be carried over the existing building.

The cooling system for the Auxiliary Building Addition is a redundant, Seismic Category I system. Electric power for it

comes from the safety related Class 1E electrical system. Cooling water comes from an extension of the safety related plant service water system into the Auxiliary Building Addition. The heating system for the Auxiliary Building Addition is not seismically classified and does not use Class 1 E power, since its operation is not essential for proper operation of the standby auxiliary feedwater pumps. Failure of the system's unit heater's supports would not damage any safety related equipment in the room. After reviewing the documents stated in the Design Criteria, and the construction procedures as stated above, it has been determined that the proposed modification does not involve an unreviewed safety question. Therefore, the proposed Auxiliary Building Addition is safe because:

1. The probability of occurrence or the consequences of an accident or malfunction of equipment or structures important to safety previously evaluated in the safety analysis report will not be increased.

2. The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report will not be created.

While referred to as an Auxiliary Building Addition, the new structure housing the standby auxiliary feedwater pumps is in reality a completely independent structure. Therefore, all normal and abnormal loads applied to this new structure will not be transmitted to any existing building. The standby auxiliary feedwater pump building is a Class I structure and as such will be designed to withstand the effects of both the Operating Basis Earthquake and the Safe Shutdown Earthquake, and the effects of short term tornado loadings, including the impact of tornado generated missiles. Therefore, this new Class I structure does not have a higher probability of failure than any of the existing Class I structures. Similarly, the Auxiliary Building Addition cooling and heating system is completely independent of the cooling and heating system in the existing auxiliary building. As such, there is no interaction between the new system and the existing system.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

GSM-16 STANDBY AUXILIARY FEEDWATER SYSTEM

The sole purpose of the standby auxiliary feedwater system is to provide auxiliary feedwater backup in the event of a high energy pipe break. It is not intended for other plant trips or transients. The standby auxiliary feedwater system shall be capable of being brought into service by operator action in the Main Control Room (MCR). The system will be activated by the operator if the existing auxiliary feedwater pumps, which start automatically, are not operative. The system flow diagram is shown on GAI Drawing D-302-071. Two Seismic Class I (as defined in the FSAR) sources of water shall be available for emergency use by the standby auxiliary feedwater system via connections to both loops of the service water system. Service water is intended to be the cooling medium used in an actual emergency situation. In addition, a supply of condensate shall be available for periodic tests of the system. The standby auxiliary feedwater system shall include two motor driven pumps, each of which will deliver emergency feedwater to a separate steam generator. In addition, the system piping shall provide the capability for the pumps to deliver water to either steam generator via a crossover with remotely operated valves between the two pump discharge lines.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions however Technical Specification changes were required.

EWR-1837 COMPUTER ROOM CEILING, FIRE DOORS, AND CONTROL ROOM KITCHEN

This modification consists of replacing fourteen existing hollow metal doors, frames and hardware with fire door assemblies that carry the underwriters approved labels. This may be either an A or B label depending upon the fire hazard. This will fulfill our commitment to the NRC given in GAI Report No. 1936, 4.2-11, 4.3-3, 4.3-7, 4.3-8, 4.3-9, 4.4-4, 4.4-9, 4.4.5-2, 4.8-3, 4.9-2. In areas that are considered to be extreme fire hazards a 3 hour protection class A fire door assembly is required. In areas where a severe fire hazard exist a 1-1/2 hour class B door assembly is required. All fire doors must be self-closing or close automatically in the event of a fire. All fire doors must be self-latching and obviously remain closed in case of fire. All hinge jambs and door leaves must have label attached.

Some doors have electric security locks. A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by the USNRC Regulatory guide, 1.70. The events related to this modification are the Fire Event and Seismic Event. None of the existing hollow metal doors with fire rated door assemblies will be designed with no degradation in the function of the seismic systems and its components. In addition, failure of the doors in a seismic event shall not result in damage to safety related equipment and the supports for the doors are designed such that the doors will not damage safety related equipment as a result of a seismic event.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2462A REACTOR COOLANT PUMP OIL COLLECTION SYSTEM SEAL BYPASS LINE RELOCATION

This modification consists of the relocation of the "B" Reactor Coolant Pump #1 seal bypass line. This relocation is necessary to permit the installation of the Lower Level Control oil collection system enclosure. The installation of the enclosure is necessary to reduce the potential of an oil fire as described in Design Criteria EWR 2462. The purpose of the seal bypass connection is to proved a sufficient flow of water across the reactor coolant pump bearing to cool it until such time as a satisfactory flow rate is established across the No. 1 seal during pump startup. The seal bypass connection also serves as a means to vent air out of the No. 1 seal cavity. A review has been made of all the events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC REgulatory Guide 1.70. The events related to this modification are (1) earthquake, (2) Cnemical and volume Control System Malfunctions, (3) loss of reactor coolant flow, and (4) primary system pipe rupture. The modification is designed as Seismic Category I. Therefore, the consequences of an earthquake are not affected. The Chemical and Volume Control System is not being changed functionally since the seal injection water flow path remains the same. Therefore the modification does not affect the probability of consequences of a CVCS malfunction. The modification serves to increase the reliability of the Reactor Coolant Pumps and since it decreases the probability of a RCP failure it will have no affect on the consequences of a loss of Reactor Coolant flow. The modified

piping does not increase the probability of a loss of coolant accident since the modification will meet or exceed the criteria to which the present line was installed. The size of the piping (3/4") does, however, fall within the envelope of pipe breaks which would not preclude a safe shutdown. Therefore, the modification does not change the consequences of a primary system pipe rupture. It has, therefore, been determined that the margins of safety during normal operations and transient conditions anticipated during the life of the station have not been affected. It has also been determined that the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2605 DIVERSE CONTAINMENT ISOLATION

A letter from Harold Denton of the NRC, dated October 30, 1979 requires in Section 2.1.4 Position 4 that: The design of control systems for automatic containment isolation valves shall be such that resetting the isolation signal will not result in the automatic reopening of containment isolation valves shall require deliberate operator action. And that: Resetting of containment isolation signals shall not result in the automatic loss of containment isolation. At Ginna Station certain valves reopen upon reset of the containment isolation or containment ventilation isolation if their controllers are set in the open position. To further reduce the likelihood inadvertent reopening of valves, a system modification will be designed to provide for individual resetting of all isolation valves to eliminate any possibility of an inadvertent opening. The modification will provide an additional reset requirement for each individual valve, in the following way: (refer to sketch 1) Upon receiving a containment isolation signal existing relay C picks up and opens normally closed contact C. This in turn removes power from, and de-energizes the new relays. When containment isolation is reset contact C will reclose. For each X-Y pair of new relays there is a pushbutton in the control room. Upon pushing the PB from X & Y relays are energized. Additionally contacts from each relay also close (R1-X1 and R1-Y1 for example) sealing in the relays until another C.I. signal. Additionally contacts

from the relay air are used to light visual indicators behind the pushbutton so that relay actuation can be verified from the control room. A third set of contacts are used to return the C.I. signal back to the existing logic, one X-Y pair for each existing C.I. contact. Relay contact pair R1-X3, -Y3 showing the wiring for a normally closed contact and relay contact pair R2-X3, -Y3 showing the wiring for a normally open contact. A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by USNRC Regulator Guide 1.70. The events related to this modification are: (1) major and minor fires, (2) seismic events, (3) loss of all a.c. power to the station auxiliaries, (4) fuel handling accidents, (5) primary system pipe rupture, (6) events leading to high containment pressure, (7) radioactive release inside containment, and (8) inadvertent opening of a pressurizer safety or relief valve.
The modification does not increase the possibility or impact of a fire. Additional wiring and cable will be added in this modification, which could add to the fire loading of the plant. Therefore, the Design Criteria requires that all such cable meet the IEEE 383-1974 flame test requirements. Because of this there will be no increase of fire loading caused by this modification. Section 26.2 of the Design Criteria provides requirements to preserve any silicone foam fire stop or seal that need to be penetrated. Per these requirements of the Design Criteria, it is determined that this modification shall not affect the consequences of a loss of all a.c. power to the Station auxiliaries, in that it does not use a.c. power for control.
Because this modification is considered seismic category I, a seismic event will not impact this modification or cause this modification to impact any system in an adverse way. The remainder of the events listed in Section 3.1 all are effected by this modification in hat without correct operation of containment isolation, an uncontrolled release of radioactive substances could occur. Section 18.0 of the design criteria requires the new equipment to have the same or better operating ability as the existing plant equipment. Section 20.0 requires that separations be maintained./ Section 21.0 requires that upon failure of a component that containment isolation is not degraded. Section 22.0 requires that the modification shall be tested prior to use. Section 6.0 requires compliance with IEEE standards 336, 344, 383 and 384. The containment isolation function and initiating signals will be unchanged. The modification impacts only the reopening of containment isolation valves following a containment isolation signal reset. Deliberate operator action will now

be required to open each valve. It has, therefore, been determined that the margins of safety during normal operations and transient conditions anticipated during the life of the station have not been affected. It has also been determined that the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2608C ELECTRICAL PENETRATION INSTALLATION

NUREG 0578 and NRC letter dated October 30, 1979 require that RG&E: Provide by January 1, 1981, two radiation monitor systems in containment. These new monitors will require special cables. Spare NIS instrumentation cables shall be used and replacement cables for NIS use installed in a timely manner. To do this new electrical penetration assemblies shall be installed. This modification is for the installation of three new containment penetrations to add the necessary coaxial cables and also provide spare instrumentation, control and power penetrations that are needed. The new penetrations shall be CE-30, CE-31, and CE-34. A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by USNRC Regulatory Guide 1.70. The events related to this modification are (1) major and minor fires, (2) seismic event, and (3) the spectrum of accidents inside of containment. The modification does not increase the possibility or impact of a fire. Additional wiring and cable will be added in this modification, which could add to the fire loading of the plant. Therefore the Design Criteria requires that all such cable meet the IEEE 383-1974 flame test requirements. Because of this there will be no increase of fire loading caused by this modification. This modification has been classified seismic class I and electrical class IE and therefore shall be designed to have no impact on the plant after an SSE. This modification is required by the Design Criteria to meet IEEE 317 and ASME BPVC III subsection NE and therefore is qualified to not deteriorate and also to fully function through the spectrum of accidents inside of containment. Therefore it shall have no impact on the plant during or after these accidents. It has, therefore, been determined that the margins of safety during normal operations and transient conditions anticipated

during the life of the station have not been affected. It has also been determined that the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2843 CONDENSATE STORAGE TANK INSTRUMENTATION

The existing level indication and alarm circuitry for the Condensate Storage Tanks consists of a single differential pressure transmitter, two remove vertical scale level indicators, a high level alarm, and a low level alarm. Section X.4.3.2-1 of RG&E responses to NRC's recommendations for Auxiliary Feedwater Systems dated November 28, 1979 and May 22, 1980 require redundant level indications and low level alarms in the control room for the Condensate Storage tanks by January 1, 1981. This modification is intended to fulfill those requirements. The design will consist of two new transmitters, each with their own power supplies and associated high and low level alarm circuitry located in separate Foxboro racks in the Relay Room. Each Foxboro rack has two independent power sources, one of which is a battery. The existing single level indicator on the main control board will be replaced with a dual indicator having completely independent inputs for each transmitter. The existing high and low level alarms are input to a single annunciator window. These inputs will be replaced with the new redundant high and low level alarm circuitry. In addition, both channels will also be monitored by the plant computer, which has its own independent power supply. See attached P&ID 03021-353, Rev. 2. This design provides functional redundancy of Condensate Storage Tank level indication and high and low level alarm all the way from the differential pressure transmitters to the indicators and alarms, including their power supplies. A review hs been made of all events analyzed in the Ginna FSAR and the events required by NRC Regulatory guide 1.70. The events related to this modification are: (1) earthquake, (2) loss of one D.C. System, (3) loss of A.C. power to station auxiliaries. The modification is not required to be seismically designed since the condensate storage tanks are not seismically designed. The modification will be designed such that, in the event of an earthquake, it will not damage safety related equipment.

Each of the two level indication channels is powered by a separate D.C. bus, therefore, loss of one D.C. bus will not cause loss of condensed storage low level alarm. Loss of A.C. power will have no effect on this modification. Therefore, the margins of safety during normal operations and transient conditions anticipated during the life of the plant are not decreased. The structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents are not adversely affected and are adequate.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2928 FIREPROOFING STEEL COLUMNS TURBINE LUBE OIL RESERVOIR AREA

A GAI fire protection study determined that structural steel columns in the Turbine Tube oil reservoir area should be fire protected. The extend of these modifications are outlined in the GAI study titled, "Fire Protection Study for Controlling Structural Failures Jeopardizing Cold Shutdown of Ginna Station," dated May 27, 1980, revised September 16, 1980. See attached sketch A for general arrangement. The fire protection as outlined in section 1.2 of this Design Criteria will allow Rochester Gas & Electric Co. to meet the Ginna Station Fire Protection Safety Evaluation Report (SER) item 3.2.8 Docket No. 50-244, dated February 14, 1979 by the U.S. Nuclear Regulatory Commission. The application of fireproofing to all structural steel columns within ten feet of the oil reservoir dike, in conjunction with automation of the existing manual fire suppression system will preclude structural failure during a fire. Automation of the existing manual fire suppression system is not included within the scope of this Design Criteria. The only event related to this modification is fire. The evaluation reported in Reference 2.2 assessed the impact of fires on the structural integrity of plant structures. Based on existing fire loadings, it was determined that protection was required only in the area of the Turbine lube oil reservoir. It was determined that protection as described in Section 1, was sufficient. The evaluation has been submitted to NRC, however the NRC has not confirmed that this modification is adequate to resolve SER item 3.2.8. The addition of fireproofing to columns within the ten foot area of the oil reservoir dikes will improve the fire safety of the

plant. This modification is passive and not designed to perform any safety function, therefore safety during normal operations and transient conditions anticipated during the life of the plant will not be affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-2947 CONTROL BUILDING FLOODING

The design will eliminate possible flooding of the two battery rooms caused by a crack break in the service water line located in the mechanical equipment room. A watertight wall will replace the door between the mechanical equipment room and battery room, therefore, flooding will be contained within the mechanical equipment room. A gravity drain system will be installed between the turbine and control buildings to control the flood level in the mechanical equipment room. The concrete and the concrete block walls in the mechanical equipment room will contain flooding within this room. A drain system will remove the water from the room to the turbine building. Within the drain system a fire damper will maintain the 2 hour fire rating of the concrete block wall and a pipe flapper will withstand the pressurization of the turbine hall. The drain system will remove the water flow equal to the water flow from the postulated crack break. A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. The events related to this modification are: (1) a seismic event, (2) pipe break outside containment, (3) fire and (4) flooding of the mechanical equipment room. The modification will be designed for a seismic event, turbine building pressurization resulting from a high energy line pipe break, fire protection and flooding of the mechanical equipment room. In the event of turbine building pressurization resulting from a high energy pipe break in the turbine building, and non-return valve has been incorporated in the drain system design to prevent pressurization of the mechanical equipment room. A fusible link actuated fire damper in the drain system will maintain the fire rating of the wall containing the drain system penetration. Seismic design shall be in accordance with the seismic design of the control building pressurization wall. The gravity drain system of the mechanical equipment room is designed to prevent level buildup of water from developing a hydrostatic pressure

that could "fail" the wall between the battery and mechanical equipment rooms. In the case of turbine building pressurization and concurrent flooding of the mechanical equipment room, a realistic pressure blast would not significantly hinder the drain of service water from the mechanical equipment room. The proposed modification does not change any assumptions in the safety analysis written in the FSAR or its supplements. It has, therefore, been determined that the margins of safety during normal operations and transient conditions anticipated during the life of the station have not been affected. It has also been determined that the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

EWR-3025 MOTOR DRIVEN AUXILIARY FEEDWATER PUMP DEFEAT CIRCUIT MODIFICATION

The proposed design would modify existing circuitry installed on the Auxiliary Feedwater Pump Flow Controls under EWR 1431 to include a lockout function during periods of plant startup and shutdown. Specifically, the lockout switch that now isolates only the second auxiliary relay (MFPX2) which closes the control valve in the bypass loop, will be modified to lock out the primary relay as well. The existing lockout switches, labeled LO MPFX2 1A1 and LO MFPX2 1B1, will be wired in series with the feed pump 1A and 1B breaker back contacts (FP1A, FP1B). In addition a contact off the turbine auto stop relay (63 XT 3) will be paralleled with the lockout contacts which will bypass the lockout once the turbine stop valve trip is latched. This feature can be used since the turbine stop valve is latched when at least one main feed pump is in service. A time delay is provided for opening this contact to assure an auxiliary feed pump start signal following a turbine trip. The proposed lockout feature will not inhibit the automatic start signal to the motor driven feedwater pumps in the event of a SI signal, a low-low steam generator level. The need for this modification is due to the fact that when the plant is in either a startup or a shutdown mode, both main feedwater pump circuit breakers are opened which

generates an automatic start signal to the motor driven auxiliary feedwater pumps. The motor driven auxiliary feedwater pumps are used in both ON and OFF modes to adjust the steam generator water level. During these conditions, the temperature of the primary side is above 350 degrees F and existing Technical Specifications prevent the placement of these pumps in the pull to lock position, a position which renders them inoperable. Existing plant procedures require during startup or shutdown conditions, that the sliding link terminals on the main feedwater breakers be "opened" blocking the auto start signal generated when both main feedwater pump breakers are opened. This allows the operator to use the motor driven auxiliary feedwater pumps and the bypass loop installed as part of EWR 1431 without the presence of the auto start signal. This is consistent with the technical specifications since the MDAFW Breakers are operational with the sliding link terminals opened and an auto start will occur on low-low steam generator terminal level or SI. This modification eliminates the need for terminal block "opening" and "closing" during normal plant operating conditions. The basic function of the lockout switch is to inhibit the auto start signal to the motor driven auxiliary feedwater pumps generated only by the main feedpumps being taken out of service. In addition, the lockout prevents energizing the MFPX2 auxiliary relay. The purpose for introducing the shunt contact off the turbine stop valve latch (auto stop) auxiliary relay is to override the lockout during conditions when at least one main feed pump is operational. A time delay is provided to ensure that, during a condition that results in the loss of both main feed water pump breakers (e.g. loss of #11 transformer) combined with the lockout switch inadvertantly left in the defeat mode, the auto start signal to the motor driven auxiliary feedwater pump breakers is not blocked. This modification will be accomplished by making wiring changes in existing control circuitry. A comparison of the safety bypass features of the proposed scheme to the existing scheme will be made and will serve to show the advantages of this modification:

Existing Control Schemes

a. During plant startup or shutdown conditions the LO MAFPX lockout switch must be placed in the "defeat" mode and the sliding link terminals of the main FW breaker placed in the "open" positions. The bypass loop can then be made operational and the auto start signal to the MDAFP is inhibited. The bypass loop is only closed by an SI signal.

The motor driven auxiliary pumps will receive an auto start signal on low-low steam generator level or on SI.

b. During plant conditions when at lest one main feedwater pump breaker is closed, the lockout switch can be placed in the "normal" position. The sliding link terminal can then be "closed". The bypass loop is still operational and will be closed along with the initiation of the auto start signal to the MDAFP if a SI signal is received, or a low-low steam generator level signal is received on both main FW breakers trip.

Proposed Control Scheme

a. With the lockout switch wired in is new circuit location, the switch is still placed in the "defeat" mode during startup or shutdown conditions. However, opening the sliding link terminals to block the auto start signal to the MDAFP breakers will not be necessary. The bypass loop is made operational. An SI or low-low steam generator level signal will close the loop and initiate an auto start signal to he motor driven auxiliary feedwater pump breakers.

b. With the lockout switch in the "normal" mode and one main FW breaker closed, the bypass loop will be operational and will be isolated along with the initiation of an auto start signal on low-low steam generator level, SI or if both main FW breakers are opened or are tripped.

c. The primary advantage of the proposed scheme is that no terminal opening is required during start or shutdown conditions. The operator must, however, place the lockout switch in the normal mode to clear the annunciator. No signal will be inhibited when i is required to mitigate an accident.

A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory Guide 1.70. Since this modification only involves the relocation of an existing lockout switch, the only events that require evaluation are the loss of normal feedwater and fires and earthquake. The effects of the loss of normal feedwater floor to the steam generators due to the introduction of a lockout of the auto start signal to the motor driven Auxiliary Feedwater Breakers has been analyzed. The existing system used a lockout switch

to inhibit an auxiliary relay thus allowing the auxiliary bypass loop to be made operational. Without the lockout feature, the bypass loop would be locked out during plant startup, shutdown or any condition with both main feedwater pumps out of service. The lockout switch allows the bypass loop to be made operational and is required to be in the "defeat" position until one main feed pump breaker is closed. In addition, this modification will prevent n auto start signal to the MDAFP breakers during conditions when only one auxiliary pump is required. This lockout, in its new location, will make the bypass loop operational during startup or shutdown conditions. The defeat switch will not inhibit an auto start signal to the MDAFP breakers due to low-low steam generator levels or an SI signal. When the defeat switch is in the normal position, the auto start signal will also be generated on the loss of both main feedwater pump breakers. These automatic signals are consistent with the existing plant operating practices. A contact off a turbine auto stop relay will be paralleled with the lockout contact. This feature will automatically inhibit the lockout whenever the turbine is latched. The automatic inhibit and administrative control of the lockout switch provide adequate assurance that the AFW start signal from the feedwater pump breakers will be reinstated during power operation. The plant response to a loss of normal feedwater event during power operation will remain unchanged. The loss of feedwater analysis assumes that the transient begins at low-low steam generator level, a condition which, along with both feedwater pump breakers opening, produces both a reactor trip and a signal to start the auxiliary feedwater pumps. The AFW automatic start signals will remain unaffected by he modification during power operation and thus the analysis assumptions and conclusions remain valid. A loss of feedwater event initiated after after an orderly power reduction and defeat of the "feedwater pumps tripped' automatic start signal will have a negligible impact on the plant because other automatic start signals will initiate AFW flow. The criteria for the modification has imposed appropriate requirements on the modification so that neither a fire or seismic event will have a deleterious effect upon the auxiliary feedwater system. Therefore, the margins of safety during normal operations and transient conditions anticipated during the life of the plant have not reduced. The adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

TSR 79-09 DIESEL GENERATOR TACHOMETER INSTALLATION

This modification involves the installation of a permanent camshaft driven tachometer for reading diesel generator rpm. The emergency diesel generator overspeed rip setpoint is presently checked with a hand held tachometer. This method is not very accurate. This modification does not change (1) the assumptions in any safety analysis in the FSAR and its supplements (2) the probability of occurences and (3) the consequences of an accident. None of the events analyzed in Ginna FSAR and listed in Tables I and II of A-303, Preparation, Review and Approval of Safety Analysis for Minor Modifications or Special Tests, will be affected by installation of this mod. The margins of safety during normal operation and transient conditions anticipated during the life of the station will be unchanged by installation of this modification. The adequacy of structures, systems and components provided for prevention of accidents and mitigation of consequences of accidents is unchanged by installation of this modification.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

TSR 80-04 INSTALLATION OF ADDITIONAL ISOLATION VALVE ON DRAIN LINE FROM "A" CVCS HOLDUP TANK

The design is for the modification of the "A" CVCS Holdup Tank Drain Line. It consists of adding an isolation valve on the drain line downstream of the tee for valve 1071. The above mentioned modification is to provide for transferring reactor cavity leakage which has accumulated in Sump "A: to the "A" CVCS Holdup Tank for reprocessing. The additional isolation valve is in the "A" CVCS HUT drain to the sump tank, between the existing elbow and the floor. A review has been made of all events analyzed in the Ginna Station FSAR and NRC Regulatory Guide No. 1.70. None of these evens will be affected by this modification. Therefore, the margin of safety during normal operations and transient conditions anticipated during the life

of the plant have not been reduced. The adequacy of structures, system, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

TSR 81-07 SAFETY INJECTION LOW FLOW INDICATIONS

This design is for the installation of a low flow indication for the Safety Injection System. It consists of installing necessary pipes, valves, fittings flow indicator, hangers and anchors to provide low flow indication in the Safety Injection Recirculation Line. The above modification is to provide for measurement of leakage past Safety Injection Check Valves. A review of all events analyzed in the Ginna Station FSAR and events requiring analysis by USNRC Reg. Guide 1.70 has been made. None of these events are related to the installation of Low Flow Indication on the Safety Injection Recirculation Line. Therefore, the margins of safety during normal operations and transient conditions anticipated during the life of the plant have not been reduced. The adequacy of structure, systems and components provided for the prevention of accidents and for the mitigation of he consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

ST 80-1 ACOUSTIC EMISSION MONITORING OF FEEDWATER ELBOWS

This special test procedure is for the special test of the main feedwater elbows. It consists of attaching acoustic emission detectors to the feedwater elbows inside containment of both steam generators and installing cable from the detectors to penetration CE-33 to a computer located in the Turbine Building. This test is designed to provide continuous on-line monitoring of the feedwater elbows and elbow to nozzle welds during plant start up and power changes.

A review has been made of all events analyzed in the Ginna Station FSAR and the events requiring analysis by NRC Regulatory

Guide 1.70. The events related to the special test are: 1. Internal and External Events - Fire, Flood, Storm or Earthquake and 2. Spectrum of Postulated Steam and Feedwater Piping Breaks. This first event includes major and minor fires, floods, storms or earthquakes. The proposed special test includes installation of UL approved and flame retardant tested cable from the feedwater elbows to penetration CE-33. As such, this test and cable installation will not increase the consequences of this event. For the second event considered, the proposed special test installations are attached only to the surface of the feedwater elbow and due to their weight (approximately 5.5 lbs.) versus the weight of the feedwater elbow (approximately 300 lbs.), these attachments do not significantly increase the seismic loading of the feedwater pipe in this area. As such, the consequences of this event are not increased by this special test.

Therefore, the margins of safety during normal operation and transient conditions anticipated during the life of the plant have not been reduced. The adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

ST 81-1 SPECIAL TEST OF NUMANCO DRUMMING UNIT

This analysis covers the special test ST 81-1 for the NUMANCO Drumming Unit. This drumming unit is a self contained device for the solidification and drumming of waste evaporator bottoms generated during the waste evaporator operation. This device is skid mounted and will be anchored to the operating floor of the Auxiliary Building.

A review of the events in Tables I and II of A-303, Preparation, Review and Approval of Safety Analysis for Minor Modifications or Special Tests, and the events requiring analysis per Regulatory Guide 1.70 has been made. The events related to this special test are: 1. Radioactive liquid system leak or failure and 2. Internal and external events - fire, flood, storm or earthquake.

With regard to radioactive liquid waste system leak or failure, the consequences of this event are not increased by the special test because the new system will interface with the liquid waste system in similar fashion to the existing system.

All liquid waste carrying components will withstand maximum internal pressure and will be secured to the NUMANCO drumming unit (anchored) and the liquid waste disposal system. They will not be routed in proximity to safeguard equipment. With regard to internal and external events - fire, floods, storms, or earthquake, the proposed special test neither penetrates any existing fire barriers nor does it affect any existing fire suppression systems. The special test does not increase any previously determined fire loadings. The special test neither affects nor is affected by any flood or storm previously evaluated. The consequences of an earthquake event are not increased by this special test because the installation will be designed to withstand a seismic event as defined in the Ginna Station FSAR using the equivalent static load method.

Therefore, the margins of safety during normal operation and transient conditions anticipated during the life of the plant have not been reduced. The adequacy of structures, systems, and components provided for the prevention of accidents and for the mitigation of the consequences of accidents have not been affected.

The Plant Operations Review Committee performed a Safety Evaluation and determined there were no unreviewed safety questions or Technical Specification changes required.

CHALLENGES TO THE PRIMARY SYSTEM PORV'S AND SAFETY VALVES

In compliance with NUREG 0737 Commitments and Ginna Station procedure O-9.3, NRC Immediate Notification, no challenges to the primary system PORV's and Safety Valves occurred during 1981.

CHALLENGES TO THE SECONDARY SYSTEM PORV'S AND SAFETY VALVES

In compliance with NUREG 0737 Commitments and Ginna Station procedure O-9.3, NRC Immediate Notification, no challenges to the secondary system PORV's and Safety Valves occurred during 1981.

RGE

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JOHN E. MAIER
Vice President

TELEPHONE
AREA CODE 716 546-2700

May 20, 1983

Mr. James M. Allan, Acting Regional Administrator
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Subject: 1981 Annual Report of Facility Changes, Tests, and Experiments Conducted Without Prior Approval
R. E. Ginna Nuclear Power Plant, Unit No. 1
Docket No. 50-244

Dear Mr. Allan:

Transmitted herewith is the submittal of the Annual Report of Facility Changes, Tests, and Experiments Conducted Without Prior Approval as required by 10 CFR 50.59 and Challenges to the Primary and Secondary PORV's and Safety Valves. This report is for the period of January 1, 1981 through December 31, 1981 inclusive.

Very Truly Yours,

John E. Maier

Attachment

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