ANNUAL RESULTS AND DATA REPORT

1983

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-266 AND 50-301

WISCONSIN ELECTRIC POWER COMPANY

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1.0 INTRODUCTION

The Point Beach Nuclear Plant, Units 1 and 2, utilize identical pressurized water reactors rated at 1518 MWt each. Each turbine-generator is capable of producing 497 MWe net (524 MWe gross) of electrical power. The plant is located 10 miles north of Two Rivers, Wisconsin, on the west shore of Lake Michigan.

2.0 HIGHLIGHTS

2.1 Unit 1

Highlights for the period 01-01-83 through 12-31-83 included the shutdown to accommodate refueling and the steam generator replacement. On 12-31-83, this outage was in its 91st day. One trip occurred when contractor personnel bumped the "B" train main steam stop valve relay while working on 1C02 thus sending a trip signal to the unit. Unit 1 operated at an average capacity factor of 54.8% and an efficiency (electric/thermal) of 33.2% with a self-imposed hot leg temperature limitation in an attempt to limit steam generator tube corrosion. The unit and reactor availability were 74.2% and 74.3%, respectively. Unit 1 generated its 39 billionth kilowatt hour (gross) on 01-14-83; its 40 billionth kilowatt hour on 05-03-83; and its 41 billionth kilowatt hour on 08-19-83.

2.2 Unit 2

Highlights for the period 01-01-83 through 12-31-83 included a 103-day refueling and steam generator tube sleeving outage, a brief outage to repair the "A" resistance temperature detector bypass manifold isolation valve (the failure of which caused the unit to trip), and a trip caused by the failure of a capacitor in an inverter. Unit 2 operated at an average capacity factor of 69.3% and an efficiency (electric/thermal) of 33.7%. The unit and reactor availability were 71.3% and 72.7%, respectively. Unit 2 generated its 38 billionth kilowatt hour (gross) on 01-17-83; its 39 billionth kilowatt hour on 07-22-83; and its 40 billionth kilowatt hour on 10-14-83.

3.0 FACILITY CHANGES, TESTS & EXPERIMENTS

3.1 Amendments to Facility Operating Licenses

During the year 1983, there were 13 license amendments issued by the U. S. Nuclear Regulatory Commission to Facility Operating License DPR-24 for Point Beach, Unit 1, and 12 for Point Beach, Unit 2. These license amendments and changes are listed by date of issuance and are summarized below:

3.1.1 03-11-83, Amendment 69 to DPR-24, Amendment 74 to DPR-27

These amendments deleted the Appendix "B" Environmental Technical Specification which pertain to the nonradiological water quality related requirements as required by the Federal Water Pollution Control Act Amendments of 1972.

3.1.2 04-15-83, Amendment 70 to DPR-24, Amendment 75 to DPR-27

These amendments addressed Technical Specification testing requirements for the containment airlock doors to achieve compliance with Appendix "J" to 10 CFR 50.

3.1.3 04-04-83, Amendment 71 to DPR-24, Amendment 76 DPR-27

These amendments consisted of changes to the Technical Specifications to allow repair of degraded steam generator tubes by sleeving, established primary coolant limits for iodine concentrations and surveillance frequency, and established a plugging limit for sleeved tubes.

3.1.4 04-15-83, Amendment 72 to DPR-24, Amendment 77 to DPR-27

These amendments modified the Specification regarding the frequency for conducting independent audits of the emergency preparedness program from once every 24 months to annually in accordance with the requirements of 10 CFR 50.54(f).

3.1.5 05-04-83, Amendment 73 to DPR-24, Amendment 78 to DPR-27

These amendments modified the Technical Specifications to allow temporary isolation of the shared motor-driven auxiliary feedwater pumps for a unit during periods of startup, shutdown and surveillance testing of the other unit provided that the turbine-driven auxiliary feedwater pumps are operable and capable of automatically delivering flow to the steam generators.

3.1.6 09-30-83, Amendment 74 to DPR-24, Amendment 79 to DPR-27

These amendments revised the degraded grid voltage relay setpoint and associated time delay as presented in Table 15.3.5-1 of the Technical Specifications.

3.1.7 09-30-83, Amendment 75 to DPR-24

This amendment approved the steam generator repair program for Point Beach, Unit 1, and required as a condition of license that the repair operations be conducted in accordance with those commitments identified in the approved repair report and reflected in the Staff's safety evaluation.

3.1.8 10-06-83, Amendment 76 to DPR-24, Amendment 80 to DPR-27

These amendments incorporated various administrative changes in the Technical Specifications in order to clarify terminology used in a limiting condition for operation, clarify language relating to a periodic calibration interval and correct specific portions of the specifications and bases.

3.1.9 10-05-83, Amendment 77 to DPR-24, Amendment 81 to DPR-27

These amendments revised the Technical Specifications to permit locating the spent fuel pool neutron absorber surveillance specimens adjacent to the spent fuel divider wall.

3.1.10 10-31-83, Amendment 78 to DPR-24, Amendment 82 to DPR-27

These amendments revised the loss of voltage relay setpoints and associated time delays in Table 15.3.5-1 of the Technical Specifications.

3.1.11 12-12-83, Amendment 83 to DPR-27

This amendment allowed a one-time relaxation of the length of time that the backup component cooling water heat exchanger may be out of service for maintenance.

3.1.12 12-28-83, Amendment 79 to DPR-24, Amendment 84 to DPR-27

These amendments added an additional reporting requirement to the Technical Specifications to report all challenges to the pressurizer power-operated relief valves and pressurizer safety valves in the annual report.

3.1.13 12-29-83, Amendment 80 to DPR-24, Amendment 85 to DPR-27

These revised the Technical Sepcifications surveillance requirements to include monthly testing of the automatic logic circuitry for the auxiliary feedwater pumps.

3.1.14 12-30-83, Amendment 81 to DPR-24

This amendment authorized Point Beach, Unit 1, reactor operations at either 2250 or 2000 psia after return to power following steam generator replacement.

3.4 Design Changes

3.4.1 The following design changes were completed during 1983:

a. E-204 (Common), Emergency Diesel Generators. An isolation switch was installed in each Diesel room which disconnects the emergency Diesel generator control circuits from the control room. Automatic start capability is maintained and local initiation of the automatic start sequence is provided.

Summary of Safety Evaluation: The modification upgrades the emergency power supply system. It allows the automatic sequencing of the emergency Diesel generator in case of a fire in the main control board.

b. E-220 (Common), Radio Power Supply Shift. The radio power source was moved for the F2 frequency from 2DY02-3 to diesel emergency lighting panel 36E-12, which provides a continuous power supply.

Summary of Safety Evaluation: The small additional load added to emergency Diesel generator G03 is not significant and will not reduce the capability of the diesel to perform its safety function.

c. E-225 (Unit 2), 2RK-38 Instrument Panel Relocation. The modification moved the RK-38 panel containing steam generator level and pressure and pressurizer level instrumentation from the west side of the west wall of the 4160 V safeguards switchgear room to a location visible to the operator from the auxiliary feed pump area.

Summary of Safety Evaluation: Relocating panel 2RK-38 to be visible from the auxiliary feedwater pump area is necessary to improve local operability of the auxiliary feedwater system, and is consistent with the panel locations described in the FFDSAR. Components and installation meet or exceed original design requirements. The modification is not nuclear safety related since the panels provide indication only.

d. E-226 (Unit 1) & E-227 (Unit 2), 4160 V Electrical System. Three new undervoltage relays were installed on each 4160 V safeguards bus (1/2A05, 1/2A06). Each of these relays operate an auxiliary relay which is installed on the safeguards bus. The auxiliary relay contacts are connected in two trains of 2/3 logic. Each train of 2/3 logic actuates a time delay relay. Time delay relays are also located on the safeguards bus. The time delay relay contacts provide the same functions as presently provided by the single undervoltage relay existing on the associated nonsafeguards 4160 V bus (1/2A03, 1/2A04) which is to trip the breaker that connects the safeguards bus to the nonsafeguards bus and causes annunciator action.

Summary of Safety Evaluation: 2/3 undervoltage logic increases plant safety by ensuring isolation of 4160 V safeguards buses from nonsafeguards power supplies. Additional undervoltage protection is required to meet NRC criteria and a Technical Specification change has been issued requiring the 2/3 logic.

e. E-230 (Unit 1), Electrical Penetrations. Penetration Q58 was replaced and new penetrations were installed in spare positions Q21 and Q22. The penetrations are required to accomplish various post-TMI in-containment system additions.

Summary of Safety Evaluation: The modification does not have deleterious effect upon plant safety. The penetration design is equal to or better than original plant design.

f. E-257 (3D) & E-258 (4D), Emergency Diesel Start Circuitry. Two parallel contacts were installed on A05 and A06 from the two emergency Diesel generator undervoltage relays that start the diesels on undervoltage. This will not allow the output breakers to close until the bus voltage decays even when the supply breakers have been opened.

Summary of Safety Evaluation: This modification will prevent possible damage to safety-related equipment by preventing closure of the emergency diesel generator output breaker on the safeguards bus before residual voltage decays. The parallel contacts in the breaker closing circuit provide 1/2 logic for undervoltage protection and protect against single undervoltage relay or contact failure, i.e., failure of one contact to close will not prevent auto closure of the emergency diesel generator output breaker on a loss of AC.

g. IC-49 (Unit 2), Reactor Protection Circuitry. One of the wires on the bistable test switches in the process control system analog racks was lifted from one terminal and reconnected to a different terminal on the same switch. This was done to all bistable test switches in the process control system analog racks with the exception of containment spray initiation from 2/3 containment pressure.

Summary of Safety Evaluation: Shorting out of one pole of the double pole test switch will better simulate actual operating conditions in the channel under test and make the discovery of previously undetectable grounds possible.

h. IC-107 (Unit 2), Feedwater Heater 4A&B Level Control. The modification permits alarming of high water level in the feedwater heater but delays the BTV closure to assist in clearing the high level alarm.

Summary of Safety Evaluation: Not nuclear safety related.

i. IC-145 (Unit 2), Manipulator Hoist Pulley Encoder. A linear displacement encoder was installed on the manipulator hoist pulley placing readout next to the load cell.

Summary of Safety Evaluation: The encoder is a superior means of determining mast height compared with the old measuring tape method.

j. IC-184 (Unit 2), Air Ejector Instrumentation Upgrade. The modification installed Hastings linear mass flow meters betwen existing flow orifice isolation valves AR-16 and AR-17. The modification is needed in view of more stringent restrictions on condenser air inleakage as it impacts turbine spindle warranty requirements.

Summary of Safety Evaluation: Not nuclear safety related.

k. IC-240 (Common), Water Treatment. The 0-600 gpm neutralizing tank pump flow meter was changed to 0-300 gpm for more accuracy.

Summary of Safety Evaluation: Not nuclear safety related.

l. IC-267 (Unit 1) & IC-268 (Unit 2), Turbine EH Control System Power Supplies. The existing SCI power supplies were removed and Lambda power supplies were installed. The Lambda power supplies have been demonstrated to be more reliable and are currently being used in Westinghouse turbine EH control systems. The modifications did not involve a change in component function.

Summary of Safety Evaluation: Not nuclear safety related.

m. IC-276 (Common), Water Treatment. Range change kits and new conductivity cells were installed in the anion/mixed bed conductivity recorder (CR-9213) to change the range from 0-50 μmho for anion (0-5 μmho for mixed bed) to a new range of 0-10 μmho for anion (0-1 μmho for mixed bed) for more accuracy.

Summary of Safety Evaluation: Not nuclear safety related.

n. IC-285 (Common), Security. The "E" field wiring was modified from a three-wire field to a five-wire field for better security protection.

Summary of Safety Evaluation: Not nuclear safety related.

o. IC-338 (Common), Security. A terminal and card reader were installed in the Security Supervisor's office.

Summary of Safety Evaluation: Not nuclear safety related.

p. M-130 (Common), Digital Off-Line Noble Gas Monitoring Systems. Procured and installed the subject systems for the main auxiliary building vent, drumming area vent and combined letdown gas stripper vent.

Summary of Safety Evaluation: Besides improving auxiliary vent stack sampling, the modification greatly improves operator ability to quickly recognize a steam generator tube failure incident (modification committed to the NRC by letter of 06-26-75, as a direct result of Unit 1 steam generator tube failure incident of 02-26-75.)

q. M-326 (Unit 2), Temperature Control Valve for Hydrogen Seal Oil Air-Side Cooler. A temperature control valve and associated piping were added to the hydrogen seal oil air-side cooler. This is to maintain the seal oil temperature constant.

Summary of Safety Evaluation: Not nuclear safety related.

r. M-453 (Unit 1) & M-454 (Unit 2), Blowdown System. The steam generator blowdown system was modified to include the installation of a blowdown heat recovery system and the connection of the blowdown filter to the waste condensate polishing demineralizers.

Summary of Safety Evaluation: Not nuclear safety related.

s. M-497 (Unit 1) & M-498 (Unit 2), Steam Generator Sampling Isolation Valve. A valve and flushing line were installed to the nearest service water discharge line.

Summary of Safety Evaluation: Not nuclear safety related; however, Chemistry & Health Physics is aware that presumed full flow of this line is to be used in calculating possible discharges.

t. M-577 (Unit 2), Gland Steam Condenser. Flanges were installed on the tube side piping to facilitate removal of the condenser endbells for inspection.

Summary of Safety Evaluation: Not nuclear safety related.

u. M-585 (Unit 2), Demineralized Water. A new demineralized water line was run from the water treatment area to the Unit 2 facade to facilitate the setup of the sludge lance trailer.

Summary of Safety Evaluation: Not nuclear safety related.

v. M-597 (Common), Upgrading Fire Barriers. The fire barriers were upgraded through the installation of three-hour fire-rated penetration seals, the design of which has been approved by the NRC. The modifications were accomplished in two phases as follows: Phase 1 was a survey of the location and description of penetrations and preparation of a penetration schedule and wall/floor drawings. Phase 2 consisted of penetration seal installation. The modification was proposed in Section 6.1.14 of the Fire Protection Review and installation fulfills commitments made in response to NRC staff positions PF-32 and PF-40.

Summary of Safety Evaluation: Not nuclear safety related.

w. M-643 (Unit 1), Residual Heat Removal. A safety hoist rig was installed for moving the containment sump "B" screen to provide more convenient access to the 850A&B valves.

Summary of Safety Evaluation: Not nuclear safety related.

x. M-655 (Unit 1) & M-656 (Unit 2), Nitrogen Backup to Pressurizer Spray Valves' Instrument Air Supply. A dedicated nitrogen supply was installed to permit operation of the spray valves if instrument air to the valves is lost. The nitrogen supply system consists of a nitrogen bottle and associated tubing and valves, and is located outside the pressurizer cubicle.

Summary of Safety Evaluation: Operation of the pressurizer spray valves is not required to prevent or mitigate the consequences of an accident. However, adding a backup nitrogen supply to the valves helps ensure the operator's ability to control reactor coolant system pressure. A relief valve in the nitrogen supply line protects the instrument air supply and associated components from overpressurization.

y. M-664 (Unit 2), Primary Sampling. The modification provided a manual isolation valve, accessible during power operation on the hot leg sample line just upstream and adjacent to 2AOV-955.

Summary of Safety Evaluation: Not nuclear safety related.

z. M-673 (Common), Instrument Air. A second instrument air dryer of larger capacity was installed and piped in parallel to the existing dryer. Dryer alarms annunciate in the control room.

Summary of Safety Evaluation: Not nuclear safety related.

aa. M-682 (Unit 2), Chemical Volume Control System. The modification installed a containment isolation valve with "T" signal trip in the reactor coolant pump seal water return line inside containment. The valve is located downstream of relief valve 2-314.

Summary of Safety Evaluation: The new valve provides additional assurance of containment isolation. The valve fails closed on loss of air or electric power and is seismically qualified.

bb. M-684 (Unit 2), Chemical Volume Control System. The modification installed a containment isolation valve on the common letdown line downstream of the orifice block valves inside containment. The isolation valve is equipped with a "T" signal trip.

Summary of Safety Evaluation: The new valve provides added assurance of containment isolation. The valve fails closed on loss of air or electrical power and is seismically qualified.

cc. M-716 (Common), Fuel Handling. A portable control rod changing tool was obtained for transfer of control rods to the spent fuel pit. This tool allows the transfer of any insert in the spent fuel pit, thus freeing up the cavity for other fuel movements.

Summary of Safety Evaluation: The modification does not present any additional threat or unanalyzed problem. The mountings are designed to hold the tool in an area of the pit where fuel is not stored.

dd. M-721 (Common), Sewage Treatment Plant. A new 17,5000 gpd sewage treatment plant was constructed to meet the Wisconsin Pollutant Discharge Elimination System (WPDES) permit requirements.

Summary of Safety Evaluation: Not nuclear safety related.

ee. M-730 (Unit 1), Steam Generator Blowdown Isolation Valves. Air-operated containment isolation valves were installed inside containment to automatically isolate steam generator blowdown and preserve containment integrity following a seismic event. The modfiication is necessary as a result of NRC IE Bulletin No. 79-02 indicating that the existing valves located outside of containment could be incapacitated by a fallen block wall in the facade stairway area.

Summary of Safety Evaluation: The new containment isolation valves provide additional assurance of containment integrity. They are seismically supported and in-containment electrical components are environmentally qualified. Valves fail closed on loss of instrument air or electrical power, and will not automatically reopen when the CI signal is cleared. All safeguards functions on existing steam generator blowdown isolation valves have been added to the new CI valves. The valves were functionally tested and Type "C" leak-tested.

ff. M-731 (Unit 2), Steam Generator Blowdown. The modification provided air-operated valves for remote automatic isolation of steam generator blowdown inside containment.

Summary of Safety Evaluation: The new containment isolation valves provide additional assurance of containment integrity. They are seismically supported and, in containment, electrical components will be environmentally qualified. The valves fail closed on loss of instrument air or electrical power and will not automatically reopen when the containment isolation signal is cleared. All safeguards functions on existing steam generator blowdown containment isolation valves were added to the new CI valves. The valves were functionally tested and Type "C" leak tested after installation.

gg. M-742 (Common), Block Wall Upgrading. Certain plant concrete block walls were upgraded incorporating Bechtel-designed bracing and/or shear transfer connections.

Summary of Safety Evaluation: This modification was performed in response to NRC IE Bulletin No. 80-11 which was issued for review and action by utilities to improve nuclear plant safety. Upgrading concrete block walls improves their structural integrity and therefore enhances plant safety. This modification did not create any new unresolved safety issues and did not decrease the margins of safety assumed in the bases for any Technical Specifications.

hh. M-750 (Unit 2), Bowser Purification. Connections were installed for a portable filter to be used with the lube oil Bowser system.

Summary of Safety Evaluation: Not nuclear safety related

ii. M-755 (Unit 1) & M-756 (Unit 2), Primary Sampling. The 3/4" Grinnel-Saunders diaphragm valves (1&2-284) and associated run of lower pressure piping between the volume control tank and FI-903 were replaced with higher pressure pipe and higher pressure valves. This was done to avoid having a run of pipe that is rated lower than primary system pressure where it is possible to pressurize this piping run to primary system pressure.

Summary of Safety Evaluation: Not nuclear safety related.

jj. M-759 (Common), Seismic Restraints. This modification was in response to the NRC issued IE Bulletin No. 79-14. It required that all safety-related piping greater than 2½" in diameter be in conformance with the original seismic design criteria. The total project included the review of approximately 34,000' of safety-related pipe 2½" or larger. A total of 2,842 pipe supports were reviewed and of these, 689 required modification.

Summary of Safety Evaluation: This modification ensured that the actual configuration of the safety-related systems meets the design requirements.

kk. M-768 (Common), Service Water Piping. Low point flush connections were installed upstream of the motor-operated auxiliary feedwater pump. The flush connections are used to flush sediment from the line to improve motor-operated valve operability and to reduce the potential for sand and silt carryover into the auxiliary feedwater system.

Summary of Safety Evaluation: Piping and installation meet or exceed high pressure service water design requirements. Integrity and operability of service water and auxiliary feedwater systems is not reduced.

ll. M-783 (Common), Auxiliary Building Shielding. The modification installed permanent shielding for MCC 1&2B32 and C59. Temporary, removable shielding recommendations are also provided. The modification was required in order to meet NUREG-0737 requirements.

Summary of Safety Evaluation: The permanent shield walls are designed to seismic criteria and constructed in accordance with appropriate quality control requirements. Protection from toppling is provided for adjacent and nearby safety-related equipment.

mm. M-802, Isokinetic Stack Sampling System. Isokinetic stack sampling systems were installed on the auxiliary building vent stack and the drumming area vent stack to provide post-accident sampling capabilities required by NUREG-0737.

Summary of Safety Evaluation: Not nuclear safety related.

nn. M-803 (Unit 1) & M-804 (Unit 2), Reactor Coolant Pump Oil Leakage Collection System. An oil collection system was added to the reactor coolant pumps capable of collecting lube oil from all potential pressurized and unpressurized leakage sites in the reactor coolant pump lube oil system. The system is required to comply with 10 CFR 50 Appendix R. A "prototype" collection system was installed on one reactor coolant pump to verify fit-up and design before doing the other pumps.

Summary of Safety Evaluation: Not nuclear safety related.

oo. M-806 (Unit 1) & M-807 (Unit 2), Main Steam Line Drain Connection. A drain connection was installed in each main steam line's low-point steam trap piping. The purpose of the drain is to improve the ability to drain the steam piping during steam generator leak testing and prevent flooding the steam lines. This is presently done by removing the steam trap tops.

Summary of Safety Evaluation: Not nuclear safety related.

pp. M-810 (Unit 2), RHR Piping. There were two parts to this modification request. Part 1 required cutting and capping of the 2" pipe connection to each RHR pump discharge line from the refueling water circulating pump (P33). This eliminated the need to leak test the piping under post-TMI requirements for systems outside containment likely to contain radioactive materials. The piping was not used and its intended function could not be clearly established, although one possibility is that the lines were to be used for adjusting the boron concentration of the RHR loops. This function is performed using other piping connections.

Part 2 of the modification request was the installation of test connections and isolation valves in the spent fuel pit filter discharge connection to the RHR pump suction header. These changes also facilitate leak testing per post-TMI requirements for systems outside containment likely to contain radioactive materials.

Summary of Safety Evaluation: Part 1 - discharge lines from P33 to the RHR discharge serve no safety function. Cap installation complies with Westinghouse Pipe Class 601 and other design criteria of the RHR system. Part 2 - not nuclear safety related.

qq. M-820 (Unit 2), Primary Sampling Test Connection, Containment Isolation Valves. The modification adds test connections for AOV-951, 953 and 955 and to the corresponding root isolation valve for each.

Summary of Safety Evaluation: Tubing and valve installation meet or exceed original system requirements. System integrity is not degraded. Completion of the modification permits leak testing of the valves in accordance with Appendix J of 10 CFR 50.

rr. M-823 (Common), Purge Exhaust Sampling. The sample point on the purge exhaust stack was moved to facilitate access for health physics monitoring.

Summary of Safety Evaluation: Not nuclear safety related.

ss. M-826 (Common), Heating Steam. Piping was installed to route condensate from the potable water heater to the floor drain. This eliminated the temporary hose set up with an open red tag series isolating the condensate return to the condensate system.

Summary of Safety Evaluation: Not nuclear safety related.

tt. 82-011 (Common), Service Water Pump Fire Wall. A fire wall was installed between the north and south service water pumps in accordance with 10 CFR 50.48 Appendix R requirements.

Summary of Safety Evaluation: The fire wall is located near safety-related service water pumps and therefore is seismically designed to prevent it from falling on the pumps.

uu. 82-23 (Unit 1) & 82-24 (Unit 2), Check Valve 862A&B Drain Connection. The modification provides a ½" drain line, isolation valve and pipe cap off of the 1&2CV-826A&B cover flange. The drain connection is required to be able to expose the valve seat to an air environment when performing 10 CFR 50 Appendix J testing.

Summary of Safety Evaluation: Design and installation meets or exceeds original system requirements, and therefore, the ability of the containment spray system to perform its design function is not degraded.

vv. 82-26 (Unit 2), Primary Sampling. The primary sample sink drain piping was rerouted to the north auxiliary building sump. This routes the sample sink directly to the sump rather than through floor drains.

Summary of Safety Evaluation: Not nuclear safety related. ALARA item.

ww. 82-45 (Common), Water Treatment. A water connection was installed to facilitate cleaning sludge out of clarifier. This will eliminate or greatly reduce the mess and tripping hazard created and abuse experienced by fire hoses.

Summary of Safety Evaluation: Not nuclear safety related.

xx. 82-49 (Common), Security Fence & "E" Field. Existing fence and "E" field were relocated to provide room for south gatehouse addition.

Summary of Safety Evaluation: Not nuclear safety related.

yy. 82-51, Fuel Oil Supply. Ninety feet of existing fuel oil supply piping was rerouted to accommodate modifications made to the plant gatehouse.

Summary of Safety Evaluation: The fuel oil transfer line is classified not nuclear safety related because adequate fuel oil supplies are maintained in the emergency Diesel generator fuel tanks and day tanks.

zz. 82-52 (Common), Fire Doors. Heavy duty closers were installed on the fire doors between the two emergency diesels.

Summary of Safety Evaluation: Not nuclear safety related.

aaa. 82-53, Auxiliary Feedwater System Inoperable Alarm. An alarm for each unit was added to the main control board which annunciates any of the following conditions: (1) Steam-driven auxiliary feedwater pump trip valves for that unit closed; (2) either motor-driven auxiliary feedwater pump control switch in pull-out; (3) both main feed pump control switches for that unit in pull-out. The alarms were required to meet a commitment to the NRC resulting from a review of the auxiliary feedwater system.

Summary of Safety Evaluation: There is no change to the existing circuitry because the modification only uses equipment additions or preexisting space equipment. Proper installation of the modification was controlled by special maintenance procedure. There is no increase in the probability of a loss of normal feedwater accident. In the event of circuitry failure, there is no accident previously evaluated since only loss of annunciator action is affected. Post-installation testing includes disabling of an auxiliary feedwater pump (motor-driven pump in pull-out/turbine-driven pump with trip valve shut) with only one pump disabled at a time so an LCO not be violated. The post-installation testing of the main feed pump circuitry was performed with each unit in a shutdown condition.

bbb. 82-54 (Unit 1) & 82-55 (Unit 2), Reactor Protection. Test switches and lights were installed to reactor protection system racks 1&2C155 and 1&2C165 and associated test jacks to provide for periodic testing of auxiliary feedwater system automatic actuation logic.

Summary of Safety Evaluation: There was no change to existing circuitry in the modifications and only equipment additions were considered. Installation and testing was controlled by special maintenance procedure.

The single failure criteria can be supported because independence of the two trains of automatic actuation of auxiliary feedwater is maintained.

ccc. 82-73 (Common), Demineralizer Cubicle Shielding. A new layer of concrete block was installed adjacent to the existing shield walls for the purpose of reducing exposure.

Summary of Safety Evaluation: Not nuclear safety related. ALARA item.

ddd. 82-77 (Unit 1), Main Steam System. The tube bundles were replaced in all moisture separator reheaters with a new design because of excessive tube failures.

Summary of Safety Evaluation: Not nuclear safety related.

eee. 82-83 (Unit 1), Feedwater Systems. The No. 4 feedwater heaters were replaced because extensive corrosion of the tubes has reduced tube wall thickness. Tube material was changed from Cu-Ni to Type 304 stainless steel.

Summary of Safety Evaluation: Not nuclear safety related.

fff. 82-86 (Unit 2), Containment Personnel Airlock. The modification provides a vacuum pump, isolation valve and associated hardware necessary to provide a system for leak testing the door seals within 3 days of opening the containment airlocks at El. 66'.

Summary of Safety Evaluation: The modification resulted in a slight change to the airlock door secondary seal's pressure boundary. This minor boundary change, past the first "O" ring seal in each door, consisted of replacing a pipe plug boundary with a short run of stainless steel tubing, associated fittings and a manual isolation valve. Administrative controls required the proposed isolation valve be normally closed when the opposite airlock door is opened.

The modification had no effect upon the structural integrity or other design features of the containment airlocks. Material and installation will meet or exceed original system specifications and code requirements.

ggg. 82-90 (Common), Security Offices. A new enclosed office was constructed for the Administrative Specialist - Security.

Summary of Safety Evaluation: Not nuclear safety related.

hhh. 82-93, Circulating Water System. A new intake crib baffle wall which will have an adjustable weir for discharge water bypass was installed.

Summary of Safety Evaluation: Not nuclear safety related.

iii. 82-95 (Unit 1) & 82-96 (Unit 2), Containment Hatch Labeling & Warning Systems. This modification more clearly labels each containment hatch with the appropriate unit number. An audible warning at each outer hatch indicates the presence of high radiation fields inside containment. The high radiation light/sign has been relocated to a more visible place. This modification responds to NRC IE Inspection Report No. 82-12.

Summary of Safety Evaluation: Not nuclear safety related.

jjj. 82-116 (Common), New Sewage Treatment Plant. A permanent ladder to the roof of the new sewage treatment plant was installed to facilitate changing the air supply inlet filters.

Summary of Safety Evaluation: Not nuclear safety related.

kkk. 82-118 (Common), Auxiliary Feedwater System. The seismic adequacy of the auxiliary feedwater system was upgraded to meet the commitments made to the NRC in response to NRC Generic Letter 81-14.

Summary of Safety Evaluation: Supports will be anchored to seismic structures. Drilling will be controlled per existing procedures to ensure rebar is not cut.

lll. 83-01 (Common), Communications. The modification retired existing KRQ-717 facilities and installed 3 new frequencies and control systems with repeater capability. An alternate power supply is provided to increase reliability of the radio system. Both the normal and alternate power source are nonsafeguards.

Summary of Safety Evaluation: Not nuclear safety related.

mmm. 83-05 (Unit 2), Primary Sampling. Valve 2-955 was replaced with a valve of higher quality to minimize leakage.

Summary of Safety Evaluation: The new valve functions the same as the existing valve and meets or exceeds original system design and installation requirements. Seismic evaluations were performed to ensure seismic qualification is maintained.

nnn. 83-12 (Common), Potable Water Remote Alarms. Alarms in the potable water room were wired to annunciate in the control room. Potable water alarms can now be acted upon more quickly than before with only a local indicator.

Summary of Safety Evaluation: Not nuclear safety related.

ooo. 83-13 (Unit 1) & 83-14 (Unit 2), Steam Jet Air Ejector Drain Loop-Seal. A loop-seal was installed on the steam jet air ejector to prevent the air ejector from sucking air through the drain line.

Summary of Safety Evaluation: Not nuclear safety related.

ppp. 83-34 (Unit 2), Reactor Coolant System. Calcium silicate box insulation jacketed with stainless steel was installed on the piping between the pressurizer and the safety valves.

Summary of Safety Evaluation: Insulating the loop seals helps to ensure maintaining the integrity of the reactor coolant system by reducing the dynamic loads on the safety valves and piping. The increased temperature of the loop seal piping is within its design limits.

qqq. 83-35 (Unit 2), Reactor Coolant System. Pressurizer safety valve discharge piping was upgraded by deleting some existing supports and adding new supports.

Summary of Safety Evaluation: Design of the new supports is based upon analysis to ensure stress limits are not exceeded. The new supports provide additional assurance that the integrity of the subject piping is not degraded by relief valve operation. Per Technical Specification 15.3.13.5, there is no requirement to inform NRC prior to installation.

rrr. 83-38 (Unit 2) & 83-39 (Unit 1), Waste Disposal. The lap joint flange on the inlet of relief valve GW-82B was replaced with a socket welded flange. The pipe support on the inlet to relief valve GW-82A was removed at El. 29'7".

Summary of Safety Evaluation: The modification improves the integrity of the gas stripper piping and thereby reduces the potential for leakage from a system containing radioactive materials.

sss. 83-45 (Common), New Radiation Monitoring System. Heating steam piping was moved to facilitate calibrating radiation monitoring system equipment.

Summary of Safety Evaluation: Not nuclear safety related.

ttt. 83-50 (Unit 2), Residual Heat Removal Pumps. An "O" ring seal was added between the shaft and the shaft sleeve to stop leakage allowed by the existing metal gasket.

Summary of Safety Evaluation: Not nuclear safety related.

uuu. 83-62 (Unit 1), Polar Crane Limit Switches. Upper limit switches were installed on the Unit 1 polar crane to prevent two-blocking. There are two limit switches of different types and they deenergize the main power supply and hoist drive motor.

Summary of Safety Evaluation: The two limit switches deenergize both the main power supply and the hoist drive motor. Before only the hoist drive motor was deenergized on the upper limit.

vvv. 83-64 (Common), Turbine Building Crane Limit Switches. Upper limit switches were installed on the turbine building crane to prevent two-blocking. There are two limit switches of different types and they deenergize the main power supply and hoist drive motor.

Summary of Safety Evaluation: The two limit switches deenergize both the main power supply and the hoist drive motor. Before only the hoist drive motor was deenergized on the upper limit.

www. 83-75 (Unit 2), Generator Potential Transformer. The cable running from the grounding transformer to the potential transformer neutral bus was disconnected at each end. A 4/0 cable was then connected to the potential transformer neutral bus to the station ground located in the potential transformer compartment.

Summary of Safety Evaluation: Not nuclear safety related.

xxx. 83-077 (Common), Radwaste Compactor. A new radwaste compactor was installed to facilitate the extra waste generated during the steam generator outage.

Summary of Safety Evaluation: Not nuclear safety related.

yyy. 83-78 (Common), Female Controlled Side Locker Room. The female controlled side locker room was moved from the area between the Unit 1 Nos. 4 & 5 feedwater heaters to its present location near the turbine building elevator. It was moved to facilitate the No. 4 feedwater heater replacement on Unit 1.

Summary of Safety Evaluation: Not nuclear safety related.

zzz. 83-80 (Unit 2), Switchyard. Instantaneous overcurrent relays were connected to separate current transformers in the ground leads from the free-standing CT structures to the ground grid. The overcurrent relays are connected to initiate the 345 KV Nos. 2 and 4 (Units 1 & 2, respectively), bus differential lockout. The modification detects a failed 345 KV CT and initiates fault clearing.

Summary of Safety Evaluation: Not nuclear safety related.

aaaa. 83-83 (Common), Security Facilities. White crushed rock was placed along "E" field instrusion detection zones to enhance closed circuit television observation and prevent weed growth.

Summary of Safety Evaluation: Not nuclear safety related.

bbbb. 83-96 (Unit 1), Generator Potential Transformer. The neutral cable from the potential transformer compartment was disconnected at the potential transformer neutral bus and at the grounding neutral transformer and grounded at both ends. A ground wire was installed from the neutral bus (potential transformer) to the ground bus at the potential transformer compartment.

Summary of Safety Evaluation: Not nuclear safety related.

cccc. 83-136 (Common), Cranes & Hoists. An I-beam trolley and chain hoist arrangement was installed in the G02 emergency Diesel generator room. It enables Maintenance personnel to more efficiently remove the cylinder banks of the emergency Diesel generator so the seal between the banks and the crankcase can be inspected.

Summary of Safety Evaluation: An evaluation of the lifting beams was done to ensure that they will remain intact during a seismic event. Use of the beams will only be for emergency Diesel generator maintenance.

dddd. 83-143 (Common), Water Heater for Primary Auxiliary Building El. 26' Decon Pad. A water heater was installed in the vicinity of the decon pad to aid in decontamination operations.

Summary of Safety Evaluation: Not nuclear safety related.

3.4.2 The following modification was completed prior to 1983 but was omitted from the previous annual report. It is discussed herein to complete and update the record.

M-772 (Common), Resin Transfer Line. A 2" stainless steel sluice pipe extension and spoolpiece were installed downstream of AOV-14 and will extend through the truck access area wall. A flush connection was installed in the existing resin sluice line near the transfer cask setdown area. The purpose of the modification is to permit sluicing resin directly to a shipping cask without going through the Atcor system.

Summary of Safety Evaluation: Not nuclear safety related.

3.5 Procedure Changes

The following emergency operating procedures were revised during 1983.

3.5.1 EOP-8B, Irradiated Fuel Handling Accident in Containment, Revision 5, 03-23-83. The procedure was upgraded to delete the use of containment check-in cards for personnel inventory.

3.5.2 EOP-8C, Irradiated Fuel Handling Accident in Primary Auxiliary Building, Revision 2, 12-05-83. The procedure was editorially upgraded to improve clarity. Reference to the Emergency Plan Implementing Procedures was added as well as the radiation monitors used for analysis of primary auxiliary building atmosphere. The titles of "Shift Supervisor" and "Duty & Call Technical Advisor" were upgraded to "Shift Superintendent" and "Duty Technical Advisor," respectively.

4.0 NUMBER OF PERSONNEL AND MAN-REM BY WORK GROUP AND JOB FUNCTION

4.1 1983

			JOB FUNCTION					
	NUMBER PERSONNEL ≥0.1 Rem	TOTAL REM PER WORK GROUP	REACTOR OPERATIONS & SURVEILLANCE	ROUTINE MAINTENANCE	INSPECTION ACTIVITIES	SPECIAL MAINTENANCE	WASTE PROCESSING	REFUELING
1. Company Employees								
Operations	65	59.830	32.830	0	9.870	0	9.320	7.810
Peak Maintenance and Maintenance	77	92.495	0	25.810	3.340	32.395	3.840	27.110
Chemistry & Health Physics	38	51.840	42.180	0	0	0	8.250	1.410
Reactor Engineering	3	3.440	0.010	0	0.280	0	0	3.150
Instrument & Control	14	5.340	0	1.550	0.630	2.260	0	0.900
Administration, Engineering, Quality & Regulatory Services	8	4.090	1.160	0	2.930	0	0	0
2. Contract Workers and Others	1,232	1,142.860	2.380	0	32.560	1,073.620	32.810	1.490
TOTALS	1,437	1,359.895*	78.560	27.360	49.610	1,108.275	54.220	41.870

*451.390 Man-Rem due to Unit 1 steam generator replacement.
524.600 Man-Rem due to Unit 2 steam generator sleeving.

5.0 STEAM GENERATOR TUBE INSERVICE INSPECTION

The following is a synopsis of findings resulting from steam generator tube inspections conducted during 1983.

5.1 Unit 1

During the Refueling 11 outage, the Unit 1 steam generators were replaced. Results of the preservice inspection will be contained in the 1984 operating report.

5.2 Unit 2

Refueling 9 Inservice Inspection

Prior to sleeving of tubes during this ninth refueling outage, eddy current inspection of both steam generator inlets was performed.

In "A" steam generator inlet, 2,983 tubes were tested through the first support and 182 tubes were inspected full-length. Four tubes were not inspected because of their location under the eddy current fixture foot.

In "B" steam generator inlet, 2,991 tubes were tested through the first support, 192 tubes were inspected through the U-bend and 33 tubes were examined full-length. Four tubes were not inspected because of their location under the eddy current fixture foot.

Results of Eddy Current Inspection

	"A" SG Inlet	"B" SG Inlet
<20%	366	159
20-29%	225	156
30-39%	33	47
40-49%	2	2
50-59%	---	1
60-69%	1	---
70-79%	---	---
80-89%	9	1
90-100%	4	---

"A" Steam Generator Examination Results

The following tubes were plugged as a result of eddy current examinations in "A" steam generator:

Tube	Defect	Location	Origin	Side
R19C05	47%	1TSP	OD	Inlet
R05C21	43%	TTS	OD	Inlet
R18C24	89%	10-12" ATE	OD	Inlet
R26C27	UDI/81%	5½-17½" ATE	OD	Inlet
R16C30	100%	5½-16" ATE	OD	Inlet
R17C30	UDI/81%	6-14" ATE/12½" ATE	OD	Inlet
R16C31	UDI	9-15" ATE	OD	Inlet
R17C31	UDI	12½-16" ATE	OD	Inlet
R18C33	UDI/84%	6-15" ATE/6" ATE	OD	Inlet
R17C34	UDI/86%	7-16" ATE/7½" ATE	OD	Inlet
R20C36	UDI	13-18" ATE	OD	Inlet
R17C37	UDI	3½-7½" ATE	OD	Inlet
R19C37	UDI/88%	4½-17½" ATE/5" ATE	OD	Inlet
R20C37	100%	6-15" ATE	OD	Inlet
R17C38	UDI	6-18" ATE	OD	Inlet
R17C39	UDI/89%/41%	10-17½" ATE/14" ATE/TTS	OD	Inlet
R17C42	100%	3-16" ATE	OD	Inlet
R18C42	68%	16" ATE	OD	Inlet
R16C43	91%	5½-18½" ATE	OD	Inlet
R17C44	UDI	8-13" ATE	OD	Inlet
R18C44	UDI	4½-14" ATE	OD	Inlet
R14C45	UDI	13-19½" ATE	OD	Inlet
R15C46	UDI	8½-16" ATE	OD	Inlet
R09C47	UDI	11½-17½ ATE	OD	Inlet
R13C47	UDI	11½-16" ATE	OD	Inlet
R14C47	UDI	14-18" ATE	OD	Inlet
R19C47	UDI	7-16" ATE	OD	Inlet
R12C48	UDI	8-8½" ATE	OD	Inlet
R14C48	89%	12-15" ATE	OD	Inlet

"B" Steam Generator Examination Results

R01C90	83%	4½-8" ATE	OD	Inlet
R17C28	51%	TTS	OD	Inlet
R09C48	43%	1" ATS	OD	Outlet

ATE - Above tube end
UDI - Undefinable indication
ATS - Above tubesheet
TTS - Top of tubesheet

"A" Steam Generator
Hot Leg

Row	Column	Indication	Location	Origin	Plugged
18	5	34%	1TSP	OD	No
19	5	47%	1TSP	OD	Yes
20	5	31%/38%	1TSP/2TSP	OD	No
23	8	29%	1TSP	OD	No
4	16	<20%	TTS	OD	No
7	16	<20%	TTS	OD	No
8	16	<20%	TTS	OD	No
2	17	<20%	TTS	OD	No
3	17	<20%	TTS	OD	No
4	17	28%	TTS	OD	No
5	17	<20%	TTS	OD	No
6	17	<20%	TTS	OD	No
7	17	<20%	TTS	OD	No
8	17	<20%	TTS	OD	No
6	18	<20%	TTS	OD	No
7	18	<20%	TTS	OD	No
8	18	<20%	TTS	OD	No
9	18	22%	TTS	OD	No
10	18	<20%	TTS	OD	No
11	18	<20%	TTS	OD	No
3	19	<20%	TTS	OD	No
4	19	<20%	TTS	OD	No
5	19	<20%	TTS	OD	No
6	19	<20%	TTS	OD	No
7	19	<20%	TTS	OD	No
9	19	22%	TTS	OD	No
10	19	28%	TTS	OD	No
11	19	<20%	TTS	OD	No
12	19	<20%	TTS	OD	No
15	19	<20%	TTS	OD	No
4	20	<20%	TTS	OD	No
5	20	<20%	TTS	OD	No
6	20	<20%	TTS	OD	No
7	20	<20%	TTS	OD	No
8	20	<20%	TTS	OD	No
9	20	<20%	TTS	OD	No
10	20	<20%	TTS	OD	No
12	20	<20%	TTS	OD	No
13	20	<20%	TTS	OD	No
14	20	<20%	TTS	OD	No
15	20	<20%	TTS	OD	No
17	20	<20%	TTS	OD	No
5	21	43%	TTS	OD	Yes
6	21	<20%	TTS	OD	No
8	21	30%	TTS	OD	No
10	21	<20%	TTS	OD	No
12	21	<20%	TTS	OD	No
13	21	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
14	21	<20%	TTS	OD	No
15	21	<20%	TTS	OD	No
16	21	<20%	TTS	OD	No
17	21	<20%	TTS	OD	No
18	21	<20%	TTS	OD	No
3	22	39%	TTS	OD	No
7	22	<20%	TTS	OD	No
8	22	<20%	TTS	OD	No
9	22	<20%	TTS	OD	No
10	22	<20%	TTS	OD	No
13	22	21%	TTS	OD	No
17	22	<20%	TTS	OD	No
18	22	<20%	TTS	OD	No
20	22	<20%	TTS	OD	No
23	22	<20%	TTS	OD	No
26	22	<20%	TTS	OD	No
3	23	34%	TTS	OD	No
4	23	<20%	TTS	OD	No
5	23	<20%	TTS	OD	No
6	23	<20%	TTS	OD	No
7	23	<20%	TTS	OD	No
8	23	23%	TTS	OD	No
9	23	<20%	TTS	OD	No
10	23	<20%	TTS	OD	No
12	23	23%	TTS	OD	No
13	23	<20%	TTS	OD	No
16	23	<20%	TTS	OD	No
17	23	<20%	TTS	OD	No
18	23	21%	TTS	OD	No
19	23	22%	TTS	OD	No
20	23	24%	TTS	OD	No
21	23	<20%	TTS	OD	No
23	23	<20%	TTS	OD	No
25	23	<20%	TTS	OD	No
26	23	<20%	TTS	OD	No
5	24	<20%	TTS	OD	No
6	24	<20%	TTS	OD	No
7	24	<20%	TTS	OD	No
8	24	<20%	TTS	OD	No
9	24	<20%	TTS	OD	No
11	24	<20%	TTS	OD	No
12	24	<20%	TTS	OD	No
13	24	<20%	TTS	OD	No
16	24	31%	TTS	OD	No
17	24	<20%	TTS	OD	No
18	24	89%	10-12" ATE	OD	Yes
19	24	38%	TTS	OD	No
21	24	<20%	TTS	OD	No
24	24	<20%	TTS	OD	No
6	25	28%	TTS	OD	No
7	25	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
8	25	<20%	TTS	OD	No
9	25	<20%	TTS	OD	No
10	25	<20%	TTS	OD	No
11	25	<20%	TTS	OD	No
12	25	<20%	TTS	OD	No
13	25	21%	TTS	OD	No
14	25	<20%	TTS	OD	No
15	25	<20%	TTS	OD	No
18	25	35%	TTS	OD	No
19	25	35%	TTS	OD	No
20	25	39%	TTS	OD	No
21	25	<20%	TTS	OD	No
22	25	<20%	TTS	OD	No
4	26	<20%	TTS	OD	No
6	26	<20%	TTS	OD	No
7	26	<20%	TTS	OD	No
8	26	<20%	TTS	OD	No
9	26	<20%	TTS	OD	No
10	26	<20%	TTS	OD	No
11	26	<20%	TTS	OD	No
12	26	<20%/26%	TTS/½"ATS	OD	No
13	26	<20%	TTS	OD	No
14	26	<20%	TTS	OD	No
15	26	<20%	TTS	OD	No
16	26	<20%	TTS	OD	No
17	26	28%	TTS	OD	No
18	26	38%	TTS	OD	No
19	26	24%	TTS	OD	No
20	26	32%	TTS	OD	No
21	26	<20%	TTS	OD	No
4	27	<20%	TTS	OD	No
5	27	<20%	TTS	OD	No
6	27	24%	TTS	OD	No
7	27	27%	TTS	OD	No
8	27	<20%	TTS	OD	No
9	27	<20%	TTS	OD	No
11	27	<20%	TTS	OD	No
12	27	<20%	TTS	OD	No
13	27	<20%	TTS	OD	No
14	27	<20%	TTS	OD	No
16	27	<20%	TTS	OD	No
17	27	<20%	TTS	OD	No
18	27	39%	TTS	OD	No
19	27	37%	TTS	OD	No
20	27	27%	TTS	OD	No
21	27	<20%	TTS	OD	No
26	27	81%/UDI	5½-17½ ATE	OD	Yes
5	28	31%	TTS	OD	No
6	28	36%	TTS	OD	No
7	28	34%	TTS	OD	No
8	28	23%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
11	28	<20%	TTS	OD	No
12	28	<20%	TTS	OD	No
13	28	<20%	TTS	OD	No
14	28	<20%	TTS	OD	No
18	28	<20%	TTS	OD	No
19	28	39%	TTS	OD	No
20	28	26%	TTS	OD	No
21	28	<20%	TTS	OD	No
23	28	28%	TTS	OD	No
5	29	<20%	TTS	OD	No
6	29	<20%	TTS	OD	No
8	29	<20%	TTS	OD	No
9	29	<20%	TTS	OD	No
10	29	<20%	TTS	OD	No
11	29	<20%	TTS	OD	No
12	29	<20%	TTS	OD	No
4	30	<20%	TTS	OD	No
6	30	<20%	TTS	OD	No
7	30	<20%	TTS	OD	No
8	30	<20%	TTS	OD	No
11	30	<20%	TTS	OD	No
12	30	<20%	TTS	OD	No
13	30	<20%	TTS	OD	No
16	30	100%	5½-16" ATE	OD	Yes
17	30	81%/UDI	12½" ATE/6-14" ATE	OD	Yes
4	31	<20%	TTS	OD	No
8	31	<20%	TTS	OD	No
13	31	<20%	TTS	OD	No
14	31	<20%	TTS	OD	No
16	31	UDI	9-15" ATE	OD	Yes
17	31	UDI	12½-16" ATE	OD	Yes
8	32	<20%	TTS	OD	No
12	32	<20%	TTS	OD	No
13	32	<20%	TTS	OD	No
14	32	<20%	TTS	OD	No
27	32	<20%	TTS	OD	No
6	33	<20%	TTS	OD	No
11	33	<20%	TTS	OD	No
12	33	<20%	TTS	OD	No
13	33	<20%	TTS	OD	No
18	33	84%/UDI	6" ATE/6-15" ATE	OD	Yes
21	33	<20%	TTS	OD	No
10	34	<20%	TTS	OD	No
11	34	<20%	TTS	OD	No
12	34	32%	TTS	OD	No
17	34	86%/UDI	7½" ATE/7-16" ATE	OD	Yes
20	34	<20%/21%	TTS/½" ATS	OD	No
21	34	<20%	TTS	OD	No
27	34	23%	TTS	OD	No
9	35	<20%	TTS	OD	No
12	35	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
13	35	<20%	TTS	OD	No
21	35	34%	TTS	OD	No
22	35	<20%	½" ATS	OD	No
26	35	22%	TTS	OD	No
7	36	<20%	TTS	OD	No
9	36	<20%	TTS	OD	No
10	36	<20%	TTS	OD	No
11	36	<20%	TTS	OD	No
12	36	<20%	TTS	OD	No
20	36	UDI	13-18" ATE	OD	Yes
7	37	<20%	TTS	OD	No
8	37	<20%	TTS	OD	No
9	37	<20%	TTS	OD	No
10	37	31%	TTS	OD	No
11	37	<20%	TTS	OD	No
12	37	<20%	TTS	OD	No
13	37	26%	TTS	OD	No
14	37	<20%	TTS	OD	No
17	37	UDI	3½-7½" ATE	OD	Yes
19	37	88%/UDI	5" ATE/4½-17½" ATE	OD	Yes
20	37	100%	6-15" ATE	OD	Yes
9	38	<20%	TTS	OD	No
10	38	<20%	TTS	OD	No
17	38	UDI	6-18" ATE	OD	Yes
18	38	<20%	1" ATS	OD	No
19	38	<20%	1" ATS	OD	No
8	39	<20%	TTS	OD	No
9	39	35%	TTS	OD	No
11	39	<20%	TTS	OD	No
12	39	23%	½" ATS	OD	No
17	39	41%/89%/UDI	TTS/14"ATE/10-17½"ATE	OD	Yes
18	39	<20%	1" ATS	OD	No
7	40	<20%	TTS	OD	No
8	40	<20%	TTS	OD	No
11	40	<20%	TTS	OD	No
12	40	<20%	TTS	OD	No
16	40	37%	TTS	OD	No
25	40	22%	TTS	OD	No
6	41	<20%	TTS	OD	No
8	41	<20%	TTS	OD	No
16	41	<20%	1" ATS	OD	No
25	41	<20%	TTS	OD	No
33	41	<20%	TTS	OD	No
6	42	<20%	TTS	OD	No
8	42	<20%	TTS	OD	No
13	42	<20%	TTS	OD	No
17	42	100%	3-16" ATE	OD	Yes
18	42	68%	16" ATE	OD	Yes
20	42	25%	½" ATS	OD	No
24	42	<20%	TTS	OD	No
25	42	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
26	42	<20%	TTS	OD	No
6	43	<20%	TTS	OD	No
8	43	<20%	TTS	OD	No
16	43	91%	5½-18½" ATE	OD	Yes
19	43	33%	TTS	OD	No
23	43	<20%	TTS	OD	No
25	43	<20%	TTS	OD	No
26	43	22%	TTS	OD	No
27	43	<20%	TTS	OD	No
28	43	30%	TTS	OD	No
5	44	<20%	TTS	OD	No
6	44	<20%	TTS	OD	No
10	44	<20%	TTS	OD	No
17	44	UDI	8½-13" ATE	OD	Yes
18	44	UDI	4½-14" ATE	OD	Yes
20	44	<20%	TTS	OD	No
24	44	<20%	TTS	OD	No
25	44	<20%	TTS	OD	No
27	44	26%	TTS	OD	No
28	44	<20%	TTS	OD	No
29	44	29%	TTS	OD	No
31	44	24%	TTS	OD	No
6	45	<20%	TTS	OD	No
7	45	<20%	TTS	OD	No
9	45	<20%	TTS	OD	No
14	45	UDI	13-19½" ATE	OD	Yes
21	45	<20%	TTS	OD	No
22	45	<20%	TTS	OD	No
29	45	<20%	TTS	OD	No
31	45	<20%	TTS	OD	No
5	46	<20%	TTS	OD	No
6	46	<20%	TTS	OD	No
9	46	<20%	TTS	OD	No
10	46	25%	TTS	OD	No
14	46	<20%	TTS	OD	No
15	46	UDI	8½-16" ATE	OD	Yes
18	46	24%	3" ATS	OD	No
20	46	31%	TTS	OD	No
21	46	30%	TTS	OD	No
23	46	<20%	TTS	OD	No
6	47	22%	TTS	OD	No
7	47	<20%	TTS	OD	No
8	47	<20%	TTS	OD	No
9	47	UDI	11½-17½" ATE	OD	Yes
13	47	UDI	11½-16" ATE	OD	Yes
14	47	<20%/UDI	½" ATS/14-18" ATE	OD	Yes
15	47	<20%	TTS	OD	No
19	47	<20%/UDI	½" ATS/7-16" ATE	OD	Yes
32	47	<20%	TTS	OD	No
2	48	<20%	TTS	OD	No
5	48	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
7	48	<20%	TTS	OD	No
12	48	<20%/UDI	TTS/8½-16" ATE	OD	Yes
13	48	<20%	TTS	OD	No
14	48	89%	12-15" ATE	OD	Yes
32	48	24%	TTS	OD	No
4	49	<20%	TTS	OD	No
6	49	<20%	TTS	OD	No
7	49	21%	TTS	OD	No
8	49	<20%	TTS	OD	No
12	49	24%	TTS	OD	No
13	49	24%	TTS	OD	No
32	49	27%	TTS	OD	No
5	50	<20%	TTS	OD	No
6	50	<20%	TTS	OD	No
7	50	22%	TTS	OD	No
8	50	<20%	TTS	OD	No
9	50	<20%	TTS	OD	No
11	50	35%	TTS	OD	No
12	50	<20%	TTS	OD	No
13	50	<20%	TTS	OD	No
20	50	38%	1" ATS	OD	No
28	50	<20%	TTS	OD	No
7	51	<20%	TTS	OD	No
8	51	<20%	TTS	OD	No
10	51	<20%	TTS	OD	No
11	51	<20%	TTS	OD	No
12	51	<20%	TTS	OD	No
18	51	27%	½" ATS	OD	No
21	51	<20%	TTS	OD	No
22	51	22%	TTS	OD	No
23	51	27%	TTS	OD	No
24	51	<20%	TTS	OD	No
27	51	<20%	TTS	OD	No
9	52	<20%	TTS	OD	No
10	52	<20%	TTS	OD	No
11	52	<20%	TTS	OD	No
14	52	<20%	TTS	OD	No
21	52	29%	TTS	OD	No
22	52	<20%	TTS	OD	No
23	52	23%	TTS	OD	No
24	52	<20%	TTS	OD	No
38	52	<20%	1" ATS	OD	No
5	53	<20%	TTS	OD	No
6	53	<20%	TTS	OD	No
9	53	<20%	TTS	OD	No
11	53	<20%	TTS	OD	No
21	53	22%	TTS	OD	No
22	53	<20%	TTS	OD	No
23	53	28%	TTS	OD	No
26	53	<20%	TTS	OD	No
30	53	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
31	53	<20%	TTS	OD	No
32	53	<20%	TTS	OD	No
6	54	<20%	TTS	OD	No
18	54	<20%	TTS	OD	No
20	54	<20%	TTS	OD	No
21	54	<20%	TTS	OD	No
22	54	22%	TTS	OD	No
24	54	28%	TTS	OD	No
30	54	<20%	TTS	OD	No
31	54	<20%	TTS	OD	No
7	55	<20%	TTS	OD	No
8	55	<20%	TTS	OD	No
20	55	33%	TTS	OD	No
21	55	25%	TTS	OD	No
22	55	22%	TTS	OD	No
24	55	22%	TTS	OD	No
29	55	<20%	TTS	OD	No
30	55	<20%	TTS	OD	No
9	56	<20%	TTS	OD	No
10	56	<20%	TTS	OD	No
18	56	<20%	TTS	OD	No
19	56	<20%	TTS	OD	No
20	56	<20%	TTS	OD	No
21	56	<20%	TTS	OD	No
24	56	<20%	TTS	OD	No
29	56	<20%	TTS	OD	No
9	57	28%	TTS	OD	No
11	57	22%	TTS	OD	No
12	57	<20%	TTS	OD	No
19	57	<20%	TTS	OD	No
20	57	<20%	TTS	OD	No
23	57	<20%	TTS	OD	No
24	57	<20%	TTS	OD	No
9	58	<20%	TTS	OD	No
12	58	<20%	TTS	OD	No
17	58	<20%	TTS	OD	No
19	58	<20%	TTS	OD	No
20	58	<20%	TTS	OD	No
23	58	<20%	TTS	OD	No
26	58	29%	TTS	OD	No
36	58	30%	12" ATE	OD	No
8	59	<20%	TTS	OD	No
9	59	<20%	TTS	OD	No
12	59	34%	½" ATS	OD	No
19	59	<20%	TTS	OD	No
27	59	<20%	TTS	OD	No
6	60	<20%	2½" ATS	OD	No
12	60	<20%	TTS	OD	No
26	60	<20%	TTS	OD	No
27	60	<20%	TTS	OD	No
10	61	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
11	61	<20%	TTS	OD	No
17	61	<20%	TTS	OD	No
21	61	<20%	TTS	OD	No
22	61	<20%	TTS	OD	No
24	61	<20%	TTS	OD	No
25	61	<20%	TTS	OD	No
26	61	<20%	TTS	OD	No
6	62	21%	TTS	OD	No
7	62	<20%	TTS	OD	No
9	62	<20%	TTS	OD	No
10	62	21%	TTS	OD	No
11	62	<20%	TTS	OD	No
13	62	<20%	TTS	OD	No
14	62	26%	TTS	OD	No
17	62	<20%	TTS	OD	No
18	62	<20%	TTS	OD	No
19	62	<20%	TTS	OD	No
20	62	24%	TTS	OD	No
23	62	<20%	TTS	OD	No
24	62	<20%	TTS	OD	No
25	62	<20%	TTS	OD	No
10	63	<20%	TTS	OD	No
17	63	26%	TTS	OD	No
18	63	<20%	TTS	OD	No
22	63	25%	TTS	OD	No
23	63	<20%	TTS	OD	No
24	63	22%	TTS	OD	No
5	64	<20%	TTS	OD	No
9	64	26%	TTS	OD	No
12	64	<20%	TTS	OD	No
19	64	21%	TTS	OD	No
20	64	23%	TTS	OD	No
22	64	<20%	TTS	OD	No
10	65	<20%	TTS	OD	No
11	65	<20%	TTS	OD	No
12	65	<20%	TTS	OD	No
15	65	<20%	TTS	OD	No
20	65	<20%	TTS	OD	No
21	65	<20%/26%	12" 1TSP/TTS	OD	No
22	65	<20%	TTS	OD	No
8	66	<20%	TTS	OD	No
9	66	<20%	TTS	OD	No
12	66	<20%	TTS	OD	No
14	66	<20%	TTS	OD	No
16	66	<20%	TTS	OD	No
17	66	<20%	TTS	OD	No
20	66	<20%/22%	TTS/1TSP	OD	No
21	66	25%	TTS	OD	No
8	67	<20%	TTS	OD	No
12	67	<20%	TTS	OD	No
17	67	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
19	67	<20%	TTS	OD	No
20	67	24%	1TSP-TTS	OD	No
21	67	<20%	TTS	OD	No
6	68	<20%	TTS	OD	No
7	68	<20%	TTS	OD	No
16	68	<20%	TTS	OD	No
17	68	<20%	TTS	OD	No
19	68	29%	TTS	OD	No
20	68	<20%	TTS	OD	No
6	69	<20%	TTS	OD	No
7	69	<20%	TTS	OD	No
12	69	<20%	TTS	OD	No
17	69	<20%	TTS	OD	No
18	69	<20%	TTS	OD	No
19	69	<20%	TTS	OD	No
20	69	<20%	TTS	OD	No
12	70	<20%	TTS	OD	No
13	70	<20%	TTS	OD	No
16	70	<20%	TTS	OD	No
17	70	<20%	TTS	OD	No
18	70	<20%	TTS	OD	No
19	70	<20%	TTS	OD	No
13	71	<20%	TTS	OD	No
16	71	<20%	TTS	OD	No
18	71	<20%	½" ATS	OD	No
12	72	<20%	1TSP-TTS	OD	No
13	72	<20%	TTS	OD	No
14	72	<20%	TTS	OD	No
16	72	<20%	TTS	OD	No
17	72	<20%	TTS	OD	No
4	73	21%	½" ATS	OD	No
13	73	<20%	TTS	OD	No
14	73	<20%	TTS	OD	No
17	73	<20%	1TSP-TTS	OD	No
12	74	23%	TTS	OD	No
13	74	<20%/28%	TTS	OD	No
14	74	38%/39%	½" ATS/½" ATS	OD	No
6	75	<20%	TTS	OD	No
10	75	<20%	TTS	OD	No
11	75	<20%	TTS	OD	No
12	75	<20%/23%	TTS/TTS	OD	No
3	76	<20%	TTS	OD	No
6	76	<20%	TTS	OD	No
7	76	22%	TTS	OD	No
10	76	<20%	TTS	OD	No
11	76	21%	TTS	OD	No
13	76	<20%	1TSP-TTS	OD	No
3	77	<20%	TTS	OD	No
4	77	24%	TTS	OD	No
8	77	<20%	TTS	OD	No
9	77	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
10	77	<20%	TTS	OD	No
10	78	<20%	TTS	OD	No
4	79	<20%	TTS	OD	No
10	79	<20%	TTS	OD	No
9	80	21%	TTS	OD	No
1	90	83%	4½-8" ATE	OD	Yes

"B" Steam Generator
Hot Leg

Row	Column	Indication	Location	Origin	Plugged
6	16	<20%	TTS	OD	No
5	17	<20%	TTS	OD	No
5	18	25%	½" ATS	OD	No
7	18	<20%	TTS	OD	No
10	18	<20%	TTS	OD	No
11	18	<20%	TTS	OD	No
7	19	<20%	TTS	OD	No
8	19	<20%	TTS	OD	No
6	21	38%	TTS	OD	No
17	21	<20%	TTS	OD	No
7	22	<20%	½" ATS	OD	No
6	23	<20%	TTS	OD	No
8	23	<20%	1" ATS	OD	No
14	23	<20%	TTS	OD	No
16	23	<20%	TTS	OD	No
24	23	<20%	TTS	OD	No
9	24	<20%	½" ATS	OD	No
14	24	<20%	TTS	OD	No
17	24	23%	TTS	OD	No
19	24	<20%	TTS	OD	No
22	24	<20%	TTS	OD	No
24	24	<20%	TTS	OD	No
9	25	22%	TTS	OD	No
12	25	<20%	TTS	OD	No
13	25	<20%	TTS	OD	No
14	25	<20%	TTS	OD	No
23	25	<20%	TTS	OD	No
25	25	27%	TTS	OD	No
9	26	31%/28%	1" ATS/½" ATS	OD	No
10	26	23%	1" ATS	OD	No
21	26	<20%	TTS	OD	No
24	26	35%	½" ATS	OD	No
25	26	35%	TTS	OD	No
12	27	<20%	TTS	OD	No
18	27	<20%	TTS	OD	No
19	27	<20%	½" ATS	OD	No
21	27	<20%	TTS	OD	No
22	27	<20%	TTS	OD	No
9	28	25%	1" ATS	OD	No
17	28	51%	TTS	OD	Yes
21	28	<20%	TTS	OD	No
27	28	<20%	TTS	OD	No
6	29	<20%	TTS	OD	No
13	29	<20%	TTS	OD	No
18	29	<20%	TTS	OD	No
23	29	23%	TTS	OD	No
24	29	<20%	TTS	OD	No
6	30	26%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
22	30	26%	1" ATS	OD	No
23	30	26%	TTS	OD	No
6	31	<20%	TTS	OD	No
7	31	<20%	TTS	OD	No
21	31	<20%	TTS	OD	No
23	31	<20%	2" ATS	OD	No
18	32	34%	1" ATS	OD	No
19	32	<20%	TTS	OD	No
21	32	<20%	TTS	OD	No
23	32	34%	2½" ATS	OD	No
6	35	<20%	TTS	OD	No
7	35	21%	½" ATS	OD	No
9	35	<20%/28%	TTS/1" ATS	OD	No
5	36	<20%	TTS	OD	No
6	36	<20%	TTS	OD	No
9	36	<20%	TTS	OD	No
11	36	24%	1" ATS	OD	No
28	36	<20%	TTS	OD	No
5	37	<20%	TTS	OD	No
6	37	<20%	TTS	OD	No
7	37	29%	1" ATS	OD	No
5	38	<20%	TTS	OD	No
7	38	23%	1" ATS	OD	No
8	38	29%	1" ATS	OD	No
14	38	35%	½" ATS	OD	No
28	38	<20%	TTS	OD	No
30	38	32%	TTS	OD	No
5	39	<20%	TTS	OD	No
6	39	<20%	TTS	OD	No
7	39	30%	1" ATS	OD	No
14	39	<20%	½" ATS	OD	No
28	39	<20%	TTS	OD	No
29	39	25%	TTS	OD	No
32	39	25%	½" ATS	OD	No
33	39	21%	½" ATS	OD	No
5	40	32%/37%	TTS/TTS	OD	No
7	40	30%	TTS	OD	No
9	40	33%	½" ATS	OD	No
13	40	<20%	TTS	OD	No
28	40	<20%	TTS	OD	No
29	40	32%	TTS	OD	No
32	40	33%	½" ATS	OD	No
6	41	<20%	TTS	OD	No
7	41	31%	TTS	OD	No
9	41	<20%	TTS	OD	No
12	41	<20%	TTS	OD	No
26	41	22%	TTS	OD	No
28	41	<20%	TTS	OD	No
33	41	29%	½" ATS	OD	No
5	42	<20%	TTS	OD	No
6	42	<20%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
9	42	27%	TTS	OD	No
28	42	<20%	TTS	OD	No
31	42	<20%	½" ATS	OD	No
32	42	24%	TTS	OD	No
7	43	32%	TTS	OD	No
13	43	<20%	½" ATS	OD	No
19	43	30%	TTS	OD	No
24	43	<20%	TTS	OD	No
5	44	29%	TTS	OD	No
7	44	33%	TTS	OD	No
10	44	<20%	TTS	OD	No
11	44	30%	1" ATS	OD	No
12	44	21%	1" ATS	OD	No
19	44	26%	TTS	OD	No
21	44	21%	TTS	OD	No
22	44	<20%/23%	TTS/4½" ATS	OD	No
23	44	36%	TTS	OD	No
24	44	<20%	TTS	OD	No
28	44	<20%	TTS	OD	No
29	44	<20%	TTS	OD	No
30	44	33%	TTS	OD	No
31	44	25%	TTS	OD	No
5	45	<20%	TTS	OD	No
6	45	33%	TTS	OD	No
10	45	<20%	TTS	OD	No
11	45	<20%	TTS	OD	No
15	45	<20%	TTS	OD	No
22	45	35%	TTS	OD	No
23	45	<20%	TTS	OD	No
29	45	<20%	TTS	OD	No
9	46	39%	1" ATS	OD	No
10	46	<20%	TTS	OD	No
11	46	<20%	TTS	OD	No
13	46	<20%	TTS	OD	No
22	46	29%	TTS	OD	No
32	46	38%	TTS	OD	No
7	47	40%	1½" ATS	OD	No
10	47	<20%	TTS	OD	No
11	47	<20%	TTS	OD	No
13	47	<20%	TTS	OD	No
14	47	25%	TTS	OD	No
16	47	<20%	½" ATS	OD	No
17	47	<20%	½" ATS	OD	No
18	47	<20%	½" ATS	OD	No
21	47	32%	TTS	OD	No
22	47	<20%	½" ATS	OD	No
23	47	<20%	½" ATS	OD	No
24	47	<20%	½" ATS	OD	No
26	47	<20%	TTS	OD	No
6	48	34%	1" ATS	OD	No
7	48	35%	1" ATS	OD	No

Row	Column	Indication	Location	Origin	Plugged
9	48	43%	1" ATS	OD	Yes
11	48	<20%	TTS	OD	No
12	48	<20%	TTS	OD	No
13	48	<20%	TTS	OD	No
14	48	<20%	TTS	OD	No
17	48	<20%	½" ATS	OD	No
21	48	33%	TTS	OD	No
22	48	<20%/32%	2½" ATS/TTS	OD	No
23	48	<20%	1" ATS	OD	No
24	48	<20%	TTS	OD	No
25	48	<20%	TTS	OD	No
6	49	28%	1" ATS	OD	No
9	49	27%	1" ATS	OD	No
12	49	32%	TTS	OD	No
13	49	<20%	TTS	OD	No
14	49	<20%	TTS	OD	No
17	49	<20%	TTS	OD	No
18	49	<20%	TTS	OD	No
21	49	25%	TTS	OD	No
22	49	<20%	TTS	OD	No
23	49	<20%	TTS	OD	No
24	49	<20%	½" ATS	OD	No
25	49	25%	TTS	OD	No
26	49	35%	TTS	OD	No
27	49	<20%	TTS	OD	No
28	49	<20%	TTS	OD	No
29	49	<20%	TTS	OD	No
11	50	<20%	TTS	OD	No
13	50	<20%	TTS	OD	No
18	50	28%/32%	1" ATS/TTS	OD	No
19	50	<20%/36%	TTS/TTS	OD	No
21	50	<20%	TTS	OD	No
22	50	36%	TTS	OD	No
23	50	33%	TTS	OD	No
25	50	31%	1½" ATS	OD	No
26	50	<20%	TTS	OD	No
27	50	<20%	TTS	OD	No
28	50	34%	TTS	OD	No
29	50	35%	TTS	OD	No
4	51	<20%	TTS	OD	No
6	51	<20%/27%	TTS/1" ATS	OD	No
9	51	<20%	TTS	OD	No
18	51	<20%	TTS	OD	No
22	51	<20%	TTS	OD	No
23	51	<20%	TTS	OD	No
25	51	<20%/25%	TTS/1" ATS	OD	No
28	51	33%	TTS	OD	No
9	52	33%	1" ATS	OD	No
11	52	<20%	TTS	OD	No
24	52	27%	TTS	OD	No
25	52	<20%	½" ATS	OD	No

Row	Column	Indication	Location	Origin	Plugged
28	52	<20%	½" ATS	OD	No
29	52	23%	TTS	OD	No
11	53	<20%	TTS	OD	No
23	53	<20%	1" ATS	OD	No
25	53	<20%	TTS	OD	No
26	53	<20%	TTS	OD	No
28	53	23%	TTS	OD	No
11	54	<20%	TTS	OD	No
17	54	<20%	TTS	OD	No
21	54	<20%	TTS	OD	No
22	54	21%	1" ATS	OD	No
25	54	<20%	TTS	OD	No
27	54	<20%	TTS	OD	No
28	54	<20%	TTS	OD	No
29	54	<20%	TTS	OD	No
22	55	<20%	TTS	OD	No
26	55	<20%	TTS	OD	No
23	56	<20%	TTS	OD	No
24	56	<20%	TTS	OD	No
27	56	<20%	TTS	OD	No
10	57	<20%	TTS	OD	No
21	57	<20%	TTS	OD	No
17	58	<20%	TTS	OD	No
21	58	33%	TTS	OD	No
23	58	30%	½" ATS	OD	No
7	59	39%	½" ATS	OD	No
9	59	<20%	TTS	OD	No
21	59	<20%	TTS	OD	No
22	59	<20%	TTS	OD	No
23	59	35%	½" ATS	OD	No
16	60	<20%	TTS	OD	No
17	60	<20%	TTS	OD	No
23	60	32%	½" ATS	OD	No
23	61	<20%	TTS	OD	No
14	64	<20%	TTS	OD	No
7	65	<20%	TTS	OD	No
9	65	<20%	TTS	OD	No
23	65	<20%	TTS	OD	No
7	66	<20%	TTS	OD	No
15	66	<20%	TTS	OD	No
23	66	<20%	TTS	OD	No
7	67	<20%	TTS	OD	No
10	68	<20%	TTS	OD	No
11	68	<20%	TTS	OD	No
5	73	26%	TTS	OD	No
4	74	<20%	TTS	OD	No
5	74	<20%	TTS	OD	No
7	74	<20%	TTS	OD	No
9	74	<20%	TTS	OD	No
9	75	25%	TTS	OD	No

Row	Column	Indication	Location	Origin	Plugged
10	76	23%	TTS	OD	No
6	77	<20%	TTS	OD	No

During the outage, a total of 1,501 sleeves were installed in the "A" steam generator and 1,500 sleeves were installed in the "B" steam generator. Inprocess and baseline eddy current examinations were performed for all tubes sleeved. No indications other than nondetectable and minor ID variations (dent ripples) were identified during the course of these inspections.

List of Sleeved Tubes
"A" Steam Generator

R02C20	R03C20	R04C20	R05C17	R05C68	R06C64
R02C21	R03C21	R04C21	R05C18	R05C69	R06C65
R02C22	R03C22	R04C22	R05C19	R05C70	R06C66
R02C23	R03C23	R04C23	R05C20	R06C16	R06C67
R02C24	R03C24	R04C24	R05C21	R06C17	R06C68
R02C25	R03C25	R04C25	R05C22	R06C18	R06C69
R02C26	R03C26	R04C26	R05C23	R06C19	R06C70
R02C27	R03C27	R04C27	R05C24	R06C20	R07C16
R02C28	R03C28	R04C28	R05C25	R06C21	R07C17
R02C29	R03C29	R04C29	R05C26	R06C22	R07C18
R02C30	R03C30	R04C30	R05C27	R06C23	R07C19
R02C31	R03C31	R04C31	R05C28	R06C24	R07C20
R02C32	R03C32	R04C32	R05C29	R06C25	R07C22
R02C33	R03C33	R04C33	R05C30	R06C26	R07C23
R02C34	R03C34	R04C34	R05C31	R06C27	R07C24
R02C35	R03C35	R04C35	R05C32	R06C28	R07C25
R02C36	R03C36	R04C36	R05C33	R06C29	R07C26
R02C37	R03C37	R04C37	R05C34	R06C30	R07C27
R02C38	R03C38	R04C38	R05C35	R06C31	R07C28
R02C39	R03C39	R04C39	R05C36	R06C32	R07C29
R02C40	R03C40	R04C40	R05C37	R06C33	R07C30
R02C41	R03C41	R04C41	R05C38	R06C34	R07C31
R02C42	R03C42	R04C42	R05C39	R06C35	R07C32
R02C43	R03C43	R04C43	R05C40	R06C36	R07C33
R02C44	R03C44	R04C44	R05C41	R06C37	R07C34
R02C45	R03C45	R04C45	R05C42	R06C38	R07C35
R02C46	R03C46	R04C46	R05C43	R06C39	R07C36
R02C47	R03C47	R04C47	R05C44	R06C40	R07C37
R02C48	R03C48	R04C48	R05C45	R06C41	R07C38
R02C49	R03C49	R04C49	R05C46	R06C42	R07C39
R02C50	R03C50	R04C50	R05C47	R06C43	R07C40
R02C51	R03C51	R04C51	R05C48	R06C44	R07C41
R02C52	R03C52	R04C52	R05C49	R06C45	R07C42
R02C53	R03C53	R04C53	R05C50	R06C46	R07C43
R02C54	R03C54	R04C54	R05C51	R06C47	R07C44
R02C55	R03C55	R04C55	R05C52	R06C48	R07C45
R02C56	R03C56	R04C56	R05C53	R06C49	R07C46
R02C57	R03C57	R04C57	R05C54	R06C50	R07C47
R02C58	R03C58	R04C58	R05C55	R06C51	R07C48
R02C59	R03C59	R04C59	R05C56	R06C52	R07C49
R02C60	R03C60	R04C60	R05C57	R06C53	R07C50
R02C61	R03C61	R04C61	R05C58	R06C54	R07C51
R02C62	R03C62	R04C62	R05C59	R06C55	R07C52
R02C63	R03C63	R04C63	R05C60	R06C56	R07C53
R02C64	R03C64	R04C64	R05C61	R06C57	R07C54
R02C65	R03C65	R04C65	R05C62	R06C58	R07C55
R02C66	R03C66	R04C66	R05C63	R06C59	R07C56
R02C67	R03C67	R04C67	R05C64	R06C60	R07C57
R02C68	R03C68	R04C68	R05C65	R06C61	R07C58
R02C69	R03C69	R04C69	R05C66	R06C62	R07C59
R02C70	R03C70	R04C70	R05C67	R06C63	R07C60

R07C61	R08C54	R09C47	R10C42	R11C40	R12C39
R07C62	R08C55	R09C48	R10C43	R11C41	R12C40
R07C63	R08C56	R09C49	R10C44	R11C42	R12C42
R07C64	R08C57	R09C50	R10C46	R11C43	R12C45
R07C65	R08C58	R09C51	R10C47	R11C44	R12C46
R07C66	R08C59	R09C52	R10C48	R11C46	R12C47
R07C67	R08C60	R09C53	R10C49	R11C47	R12C48
R07C68	R08C61	R09C55	R10C50	R11C48	R12C49
R07C69	R08C62	R09C56	R10C51	R11C49	R12C50
R07C70	R08C63	R09C57	R10C52	R11C50	R12C51
R07C71	R08C64	R09C58	R10C53	R11C51	R12C52
R07C72	R08C65	R09C59	R10C54	R11C52	R12C53
R07C73	R08C66	R09C60	R10C55	R11C53	R12C54
R07C74	R08C67	R09C61	R10C56	R11C54	R12C55
R07C75	R08C68	R09C62	R10C57	R11C55	R12C56
R07C76	R08C69	R09C63	R10C60	R11C56	R12C57
R08C16	R08C70	R09C64	R10C61	R11C57	R12C58
R08C17	R08C71	R09C65	R10C62	R11C58	R12C59
R08C18	R08C72	R09C66	R10C63	R11C59	R12C60
R08C19	R08C73	R09C67	R10C65	R11C60	R12C61
R08C20	R08C74	R09C68	R10C66	R11C61	R12C62
R08C21	R08C75	R09C69	R10C67	R11C62	R12C63
R08C22	R08C76	R09C70	R10C68	R11C63	R12C64
R08C23	R09C16	R09C71	R10C69	R11C64	R12C65
R08C24	R09C17	R09C72	R10C70	R11C65	R12C66
R08C25	R09C18	R09C73	R10C71	R11C66	R12C67
R08C26	R09C19	R09C74*	R10C72	R11C67	R12C68
R08C27	R09C20	R09C75	R10C73	R11C68	R12C69
R08C28	R09C21	R09C76	R10C74	R11C69	R12C70
R08C29	R09C22	R09C77	R10C75	R11C70	R12C72
R08C30	R09C23	R10C16	R10C76	R11C71	R12C74
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R08C32	R09C25	R10C18	R11C18	R11C73	R12C76
R08C33	R09C26	R10C19	R11C19	R11C75	R13C18
R08C34	R09C27	R10C20	R11C20	R11C76	R13C20
R08C35	R09C28	R10C21	R11C21	R12C18	R13C21
R08C36	R09C29	R10C22	R11C22	R12C19	R13C22
R08C37	R09C30	R10C23	R11C23	R12C20	R13C23
R08C38	R09C31	R10C25	R11C24	R12C21	R13C24
R08C39	R09C32	R10C26	R11C25	R12C23	R13C25
R08C40	R09C33	R10C27	R11C26	R12C24	R13C26
R08C41	R09C34	R10C28	R11C27	R12C25	R13C27
R08C42	R09C35	R10C29	R11C28	R12C26	R13C28
R08C43	R09C36	R10C30	R11C29	R12C27	R13C29
R08C44	R09C37	R10C31	R11C30	R12C28	R13C30
R08C45	R09C38	R10C32	R11C31	R12C29	R13C31
R08C46	R09C39	R10C33	R11C32	R12C30	R13C32
R08C47	R09C40	R10C34	R11C33	R12C32	R13C33
R08C48	R09C41	R10C35	R11C34	R12C33	R13C35
R08C49	R09C42	R10C36	R11C35	R12C34	R13C37
R08C50	R09C43	R10C37	R11C36	R12C35	R13C38
R08C51	R09C44	R10C38	R11C37	R12C36	R13C39
R08C52	R09C45	R10C40	R11C38	R12C37	R13C40
R08C53	R09C46	R10C41	R11C39	R12C38	R13C42

*Sleeved tube subsequently plugged.

R13C43	R14C41	R15C36	R16C31	R17C26	R18C27
R13C45	R14C42	R15C37	R16C32	R17C27	R18C28
R13C47	R14C43	R15C38	R16C33	R17C28	R18C29
R13C48	R14C44	R15C39	R16C35	R17C29	R18C30
R13C49	R14C45	R15C40	R16C36	R17C30	R18C31
R13C50	R14C46	R15C41	R16C37	R17C31	R18C32
R13C51	R14C47	R15C42	R16C38	R17C32	R18C33
R13C52	R14C48	R15C43	R16C39	R17C34	R18C34
R13C53	R14C49	R15C44	R16C40	R17C35	R18C35
R13C54	R14C50	R15C45	R16C41	R17C37	R18C36
R13C55	R14C51	R15C46	R16C42	R17C38	R18C38
R13C56	R14C52	R15C47	R16C43	R17C39	R18C39
R13C57	R14C53	R15C48	R16C44	R17C42	R18C40
R13C58	R14C54	R15C49	R16C45	R17C43	R18C42
R13C59	R14C55	R15C50	R16C46	R17C44	R18C44
R13C60	R14C56	R15C51	R16C47	R17C46	R18C45
R13C61	R14C57	R15C52	R16C48	R17C47	R18C46
R13C62	R14C58	R15C53	R16C49	R17C48	R18C47
R13C63	R14C59	R15C54	R16C50	R17C49	R18C48
R13C64	R14C60	R15C55	R16C51	R17C50	R18C49
R13C65	R14C61	R15C56	R16C52	R17C51	R18C50
R13C66	R14C62	R15C57	R16C53	R17C52	R18C51
R13C67	R14C63	R15C58	R16C54	R17C53	R18C52
R13C68	R14C64	R15C59	R16C55	R17C54	R18C53
R13C69	R14C65	R15C60	R16C56	R17C55	R18C54
R13C70	R14C66	R15C61	R16C57	R17C56	R18C55
R13C71	R14C67	R15C62	R16C58	R17C57	R18C56
R13C72	R14C68	R15C63	R16C59	R17C58	R18C57
R13C73	R14C69	R15C64	R16C60	R17C59	R18C58
R13C74	R14C70	R15C65	R16C61	R17C60	R18C59
R13C75	R14C71	R15C66	R16C62	R17C61	R18C60
R13C76	R14C72	R15C67	R16C63	R17C62	R18C61
R14C18	R14C73	R15C68	R16C64	R17C63	R18C62
R14C19	R14C74	R15C69	R16C65	R17C64	R18C63
R14C20	R14C75	R15C70	R16C66	R17C65	R18C64
R14C21	R14C76	R15C71	R16C67	R17C66	R18C65
R14C22	R15C18	R15C72	R16C68	R17C67	R18C66
R14C23	R15C19	R15C74	R16C69	R17C68	R18C67
R14C24	R15C20	R15C75	R16C70	R17C69	R18C69
R14C25	R15C21	R15C76	R16C71	R17C70	R18C70
R14C26	R15C22	R16C18	R16C72	R17C72	R18C71
R14C27	R15C23	R16C19	R16C73	R17C73	R18C72
R14C28	R15C24	R16C20	R16C74	R17C74	R18C73
R14C29	R15C25	R16C21	R16C75	R17C75	R18C74
R14C30	R15C26	R16C22	R16C76	R18C18	R19C18
R14C31	R15C27	R16C23	R17C18	R18C19	R19C19
R14C32	R15C28	R16C24	R17C19	R18C20	R19C20
R14C33	R15C29	R16C25	R17C20	R18C21	R19C21
R14C37	R15C30	R16C26	R17C21	R18C22	R19C22
R14C38	R15C31	R16C27	R17C22	R18C23	R19C23
R14C39	R15C32	R16C28	R17C23	R18C24	R19C24
R14C40	R15C33	R16C29	R17C24	R18C25	R19C25
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R19C54	R20C62	R21C71	R23C21	R24C26	R25C30
R19C55	R20C64	R21C72	R23C22	R24C27	R25C31
R19C56	R20C65	R21C73	R23C23	R24C28	R25C32
R19C57	R20C66	R22C20	R23C24	R24C29	R25C33
R19C58	R20C67	R22C21	R23C25	R24C30	R25C34
R19C59	R20C68	R22C22	R23C26	R24C31	R25C35
R19C60	R20C69	R22C23	R23C27	R24C32	R25C36
R19C61	R20C70	R22C24	R23C28	R24C33	R25C37
R19C62	R20C71	R22C25	R23C29	R24C34	R25C38
R19C64	R20C72	R22C26	R23C30	R24C35	R25C39
R19C67	R20C73	R22C27	R23C31	R24C36	R25C40
R19C68	R21C19	R22C28	R23C32	R24C37	R25C41
R19C69	R21C20	R22C29	R23C33	R24C38	R25C42
R19C70	R21C21	R22C30	R23C34	R24C39	R25C43
R19C71	R21C22	R22C31	R23C35	R24C40	R25C44
R19C72	R21C23	R22C32	R23C36	R24C41	R25C45
R19C73	R21C24	R22C33	R23C37	R24C42	R25C46
R20C18	R21C25	R22C34	R23C38	R24C43	R25C47
R20C19	R21C26	R22C35	R23C39	R24C44	R25C48
R20C20	R21C27	R22C36	R23C40	R24C45	R25C49
R20C21	R21C28	R22C37	R23C42	R24C46	R25C50
R20C22	R21C29	R22C38	R23C43	R24C47	R25C51
R20C23	R21C30	R22C39	R23C44	R24C48	R25C52
R20C25	R21C31	R22C40	R23C46	R24C49	R25C53
R20C26	R21C32	R22C41	R23C47	R24C50	R25C54
R20C27	R21C33	R22C42	R23C48	R24C51	R25C56
R20C28	R21C34	R22C43	R23C49	R24C52	R25C57
R20C29	R21C35	R22C45	R23C50	R24C53	R25C58
R20C30	R21C36	R22C46	R23C51	R24C54	R25C59

"B" Steam Generator

R02C20	R03C20	R04C20	R05C21	R06C24	R07C21
R02C21	R03C21	R04C21	R05C22	R06C25	R07C22
R02C22	R03C22	R04C22	R05C23	R06C26	R07C23
R02C23	R03C23	R04C23	R05C24	R06C27	R07C24
R02C24	R03C24	R04C24	R05C25	R06C28	R07C25
R02C25	R03C25	R04C25	R05C26	R06C29	R07C26
R02C26	R03C26	R04C26	R05C27	R06C30	R07C27
R02C27	R03C27	R04C27	R05C28	R06C31	R07C28
R02C28	R03C28	R04C28	R05C29	R06C32	R07C29
R02C29	R03C29	R04C29	R05C30	R06C33	R07C30
R02C30	R03C30	R04C30	R05C31	R06C34	R07C31
R02C31	R03C31	R04C31	R05C32	R06C35	R07C32
R02C32	R03C32	R04C32	R05C33	R06C36	R07C33
R02C33	R03C33	R04C33	R05C34	R06C37	R07C34
R02C34	R03C34	R04C34	R05C35	R06C38	R07C35
R02C35	R03C35	R04C35	R05C36	R06C39	R07C37
R02C36	R03C36	R04C36	R05C37	R06C40	R07C38
R02C37	R03C37	R04C37	R05C38	R06C41	R07C39
R02C38	R03C38	R04C38	R05C39	R06C42	R07C40
R02C39	R03C39	R04C39	R05C40	R06C43	R07C41
R02C40	R03C40	R04C40	R05C41	R06C45	R07C42
R02C41	R03C41	R04C41	R05C42	R06C46	R07C43
R02C42	R03C42	R04C42	R05C43	R06C47	R07C44
R02C43	R03C43	R04C43	R05C44	R06C48	R07C45
R02C44	R03C44	R04C44	R05C45	R06C49	R07C46
R02C45	R03C45	R04C45	R05C46	R06C50	R07C47
R02C46	R03C46	R04C46	R05C47	R06C51	R07C48
R02C47	R03C47	R04C47	R05C48	R06C52	R07C49
R02C48	R03C48	R04C48	R05C49	R06C53	R07C50
R02C49	R03C49	R04C49	R05C50	R06C54	R07C51
R02C50	R03C50	R04C50	R05C51	R06C55	R07C52
R02C51	R03C51	R04C51	R05C52	R06C56	R07C53
R02C52	R03C52	R04C52	R05C53	R06C57	R07C54
R02C53	R03C53	R04C53	R05C54	R06C59	R07C55
R02C54	R03C54	R04C55	R05C55	R06C60	R07C56
R02C55	R03C55	R04C56	R05C56	R06C61	R07C57
R02C56	R03C56	R04C57	R05C57	R06C62	R07C58
R02C57	R03C57	R04C58	R05C59	R06C63	R07C59
R02C58	R03C58	R04C59	R05C60	R06C64	R07C60
R02C59	R03C59	R04C60	R05C61	R06C65	R07C61
R02C60	R03C60	R04C61	R05C62	R06C66	R07C62
R02C61	R03C61	R04C62	R05C63	R06C67	R07C63
R02C62	R03C62	R04C63	R05C64	R06C68	R07C64
R02C63	R03C63	R04C64	R05C65	R06C69	R07C65
R02C64	R03C64	R04C65	R05C66	R06C70	R07C66
R02C65	R03C65	R04C66	R05C67	R06C71	R07C67
R02C66	R03C66	R04C67	R05C68	R06C72	R07C68
R02C67	R03C67	R04C68	R05C69	R06C73	R07C69
R02C68	R03C68	R04C69	R05C70	R07C18	R07C70
R02C69	R03C69	R04C70	R06C21	R07C19	R07C71
R02C70	R03C70	R05C20	R06C23	R07C20	R07C72

R07C73	R08C70	R09C69	R10C65	R11C58	R12C53
R07C74	R08C71	R09C70	R10C66	R11C59	R12C54
R08C18	R08C72	R09C71	R10C67	R11C60	R12C55
R08C19	R08C73	R09C72	R10C68	R11C61	R12C56
R08C20	R08C74	R09C73	R10C69	R11C62	R12C57
R08C21	R09C18	R09C74	R10C70	R11C63	R12C58
R08C22	R09C19	R10C17	R10C71	R11C64	R12C59
R08C23	R09C20	R10C18	R10C72	R11C65	R12C60
R08C24	R09C21	R10C19	R10C73	R11C66	R12C61
R08C25	R09C22	R10C20	R10C74	R11C67	R12C62
R08C26	R09C23	R10C21		R11C68	R12C63
R08C27	R09C24	R10C22		R11C69	R12C64
R08C28	R09C25	R10C23	R11C18	R11C70	R12C65
R08C29	R09C26	R10C24	R11C19	R11C71	R12C66
R08C30	R09C27	R10C25	R11C20	R11C72	R12C67
R08C31	R09C28	R10C26	R11C21	R11C73	R12C68
R08C32	R09C29	R10C27	R11C22	R11C74	R12C69
R08C33	R09C30	R10C28	R11C23	R11C75	R12C70
R08C34	R09C31	R10C29	R11C24	R11C76	R12C71
R08C35	R09C32	R10C30	R11C25	R12C18	R12C72
R08C36	R09C33	R10C31	R11C26	R12C19	R12C73
R08C37	R09C34	R10C32	R11C27	R12C20	R12C74
R08C38	R09C35	R10C33	R11C28	R12C21	R12C75
R08C39	R09C36	R10C34	R11C29	R12C22	R12C76
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R08C41	R09C38	R10C36	R11C31	R12C24	R13C19
R08C42	R09C39	R10C37	R11C32	R12C25	R13C20
R08C43	R09C40	R10C38	R11C33	R12C26	R13C21
R08C44	R09C41	R10C39	R11C34	R12C27	R13C22
R08C45	R09C42	R10C40	R11C35	R12C28	R13C23
R08C46	R09C43	R10C41	R11C36	R12C29	R13C24
R08C47	R09C44	R10C42	R11C37	R12C30	R13C25
R08C48	R09C45	R10C43	R11C38	R12C31	R13C26
R08C49	R09C46	R10C44	R11C39	R12C32	R13C27
R08C50	R09C47	R10C45	R11C40	R12C33	R13C28
R08C51	R09C49	R10C46	R11C41	R12C34	R13C29
R08C52	R09C50	R10C47	R11C42	R12C35	R13C30
R08C53	R09C51	R10C48	R11C43	R12C36	R13C31
R08C54	R09C52	R10C49	R11C44	R12C37	R13C32
R08C55	R09C53	R10C50	R11C45	R12C38	R13C33
R08C56	R09C54	R10C51	R11C46	R12C39	R13C34
R08C57	R09C55	R10C52	R11C47	R12C40	R13C35
R08C58	R09C56	R10C53	R11C48	R12C41	R13C36
R08C59	R09C57	R10C54	R11C49	R12C42	R13C37
R08C60	R09C58	R10C55	R11C50	R12C43	R13C38
R08C61	R09C59	R10C56	R11C51	R12C44	R13C39
R08C62	R09C60	R10C57	R11C52	R12C45	R13C40
R08C63	R09C61	R10C58	R11C53	R12C46	R13C41
R08C64	R09C62	R10C59	R11C54	R12C47	R13C42
R08C65	R09C63	R10C60	R11C55	R12C48	R13C43
R08C66	R09C65	R10C61	R11C56	R12C49	R13C44
R08C67	R09C66	R10C62	R11C57	R12C50	R13C45
R08C68	R09C67	R10C63		R12C51	R13C46
R08C69	R09C68	R10C64		R12C52	R13C47

R13C48	R14C43	R15C40	R16C36	R17C32	R18C30
R13C49	R14C44	R15C41	R16C37	R17C33	R18C31
R13C50	R14C45	R15C42	R16C38	R17C34	R18C32
R13C51	R14C46	R15C43	R16C39	R17C35	R18C33
R13C52	R14C47	R15C44	R16C40	R17C36	R18C34
R13C53	R14C48	R15C45	R16C41	R17C37	R18C35
R13C54	R14C49	R15C46	R16C42	R17C38	R18C36
R13C55	R14C50	R15C47	R16C43	R17C39	R18C37
R13C56	R14C51	R15C48	R16C44	R17C40	R18C38
R13C57	R14C52	R15C49	R16C45	R17C41	R18C39
R13C58	R14C53	R15C50	R16C46	R17C42	R18C40
R13C59	R14C54	R15C51	R16C47	R17C43	R18C41
R13C60	R14C55	R15C52	R16C48	R17C44	R18C42
R13C61	R14C56	R15C53	R16C49	R17C45	R18C43
R13C62	R14C57	R15C54	R16C50	R17C46	R18C44
R13C63	R14C58	R15C55	R16C51	R17C47	R18C45
R13C64	R14C59	R15C56	R16C52	R17C48	R18C46
R13C65	R14C60	R15C57	R16C53	R17C49	R18C47
R13C66	R14C61	R15C58	R16C54	R17C50	R18C48
R13C67	R14C62	R15C59	R16C55	R17C51	R18C49
R13C68	R14C63	R15C60	R16C56	R17C52	R18C50
R13C69	R14C64	R15C61	R16C57	R17C53	R18C51
R13C70	R14C65	R15C62	R16C58	R17C54	R18C52
R13C71	R14C66	R15C63	R16C59	R17C55	R18C53
R13C72	R14C67	R15C64	R16C60	R17C56	R18C54
R13C73	R14C68	R15C65	R16C61	R17C57	R18C55
R13C74	R14C69	R15C66	R16C62	R17C58	R18C56
R13C75	R14C70	R15C67	R16C63	R17C59	R18C57
R13C76	R14C71	R15C68	R16C64	R17C60	R18C58
R14C18	R14C72	R15C69	R16C65	R17C61	R18C59
R14C19	R14C73	R15C70	R16C66	R17C62	R18C60
R14C20	R14C74	R15C71	R16C67	R17C63	R18C61
R14C21	R14C75	R15C72	R16C68	R17C64	R18C62
R14C23	R15C18	R15C73	R16C69	R17C65	R18C63
R14C24	R15C19	R15C74	R16C70	R17C66	R18C64
R14C25	R15C20	R15C75	R16C71	R17C67	R18C65
R14C26	R15C21	R16C18	R16C72	R17C68	R18C66
R14C27	R15C22	R16C19	R16C73	R17C69	R18C67
R14C28	R15C23	R16C20	R16C74	R17C70	R18C68
R14C29	R15C24	R16C21	R17C17	R17C71	R18C69
R14C30	R15C25	R16C22	R17C18	R17C72	R18C70
R14C31	R15C26	R16C23	R17C19	R17C73	R18C71
R14C32	R15C27	R16C24	R17C20	R18C18	R18C72
R14C33	R15C28	R16C25	R17C21	R18C19	R18C73
R14C34	R15C29	R16C26	R17C22	R18C20	R19C17
R14C35	R15C30	R16C27	R17C23	R18C21	R19C18
R14C36	R15C31	R16C28	R17C24	R18C22	R19C19
R14C37	R15C33	R16C29	R17C25	R18C23	R19C20
R14C38	R15C34	R16C30	R17C26	R18C24	R19C21
R14C39	R15C35	R16C31	R17C27	R18C25	R19C22
	R15C36	R16C32	R17C28	R18C26	R19C23
R14C40	R15C37	R16C33	R17C29	R18C27	R19C24
R14C41	R15C38	R16C34	R17C30	R18C28	R19C25
R14C42	R15C39	R16C35	R17C31	R18C29	R19C26

R19C27	R20C24	R21C23	R22C24	R23C31	R24C34
R19C28	R20C25	R21C24	R22C26	R23C32	R24C35
R19C29	R20C26	R21C25	R22C27	R23C33	R24C36
R19C30	R20C27	R21C26	R22C28	R23C34	R24C37
R19C31	R20C28	R21C27	R22C30	R23C35	R24C38
R19C32	R20C29	R21C28	R22C31	R23C3[illegible]	R24C39
R19C33	R20C30	R21C29	R22C32	R23C[illegible]	R24C40
R19C34	R20C31	R21C30	R22C33	R23C38	R24C41
R19C35	R20C32	R21C31	R22C34	R23C39	R24C42
R19C36	R20C33	R21C32	R22C35	R23C40	R24C43
R19C37	R20C34	R21C33	R22C36		R24C44
R19C38	R20C35	R21C35	R22C37	R23C41	R24C45
R19C39	R20C36	R21C36	R22C38	R23C42	R24C47
R19C40	R20C37	R21C37	R22C39	R23C43	R24C48
R19C41	R20C38	R21C38	R22C40	R23C44	R24C49
R19C42	R20C39	R21C39	R22C41	R23C45	R24C50
R19C43	R20C40	R21C40	R22C42	R23C46	R24C51
R19C44	R20C41	R21C41	R22C43	R23C47	R24C52
R19C45	R20C42	R21C42	R22C44	R23C48	R24C53
R19C46	R20C43	R21C43	R22C45	R23C49	R24C54
R19C47	R20C44	R21C44	R22C46	R23C50	R24C55
R19C48	R20C45	R21C45	R22C47	R23C51	R24C56
R19C49	R20C46	R21C46	R22C48	R23C52	R24C57
R19C50	R20C47	R21C47	R22C49	R23C53	R24C58
R19C51	R20C48	R21C48	R22C50	R23C54	R24C59
R19C52	R20C49	R21C49	R22C51	R23C55	R24C60
R19C53	R20C50	R21C50	R22C52	R23C56	R24C61
R19C54	R20C51	R21C51	R22C53	R23C57	R24C62
R19C55	R20C52	R21C52	R22C54	R23C58	R24C63
R19C56	R20C53	R21C53	R22C55	R23C59	R24C64
R19C57	R20C54	R21C54	R22C56	R23C60	R24C65
R19C58	R20C55	R21C55	R22C57	R23C61	R24C66
R19C59	R20C56	R21C56	R22C58	R23C62	R24C67
R19C60	R20C57	R21C57	R22C59	R23C63	R24C68
R19C61	R20C58	R21C58	R22C60	R23C64	R24C69
R19C62	R20C59	R21C59	R22C61	R23C65	R24C70
R19C63	R20C60	R21C60	R22C62	R23C66	R24C71
R19C64	R20C61	R21C61	R22C63	R23C67	R25C22
R19C65	R20C62	R21C62	R22C64	R23C68	R25C23
R19C66	R20C63	R21C63	R22C65	R23C69	R25C24
R19C67	R20C64	R21C64	R22C66	R23C70	R25C25
R19C68	R20C65	R21C65	R22C67	R23C71	R25C26
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R19C70	R20C67	R21C67	R22C69	R24C23	R25C28
R19C71	R20C68	R21C68	R22C70	R24C24	R25C29
R19C72	R20C69	R21C69	R22C71	R24C26	R25C30
R19C73	R20C70	R21C70	R23C21	R24C27	R25C31
R20C18	R20C71	R21C71	R23C22	R24C28	R25C32
R20C19	R20C72	R21C72	R23C23	R24C29	R25C33
R20C20	R21C19	R22C20	R23C24	R24C30	R25C34
R20C21	R21C20	R22C21	R23C25	R24C31	R25C35
R20C22	R21C21	R22C22	R23C29	R24C32	R25C36
R20C23	R21C22	R22C23	R23C30	R24C33	R25C37

6.0 REACTOR COOLANT SYSTEM RELIEF VALVE CHALLENGES

There was one challenge to the Unit 2 reactor coolant system power-operated relief valves during 1983. With the reactor coolant system "solid" and stable at 180°F and 375 psig, an attempt was made to equalize the levels of the two safety injection accumulators. Immediately after opening the isolation valves between the two accumulators and the cold leg injection header for equalization, an "overtemperature/overpressure" alarm was received. The two valves were promptly closed. It was not realized that two other isolation valves between the cold leg injection line header and the primary system had been reopened for plant startup. These two open valves created a direct connection between the two accumulators and the primary system. Between the time that the valves were opened to equalize the accumulators and the time that they were closed after the alarm, the primary system pressure reached 410 psig and lifted at least one power-operated relief valve under the control of the low temperature overpressurization system.

There were no challenges to the Unit 1 reactor coolant system power-operated relief or safety valves during 1983.

DmB

Wisconsin Electric POWER COMPANY
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

March 1, 1984

PRINCIPAL STAFF			
RA		DPRP	✓
D/RA		DE	
A/RA		DRMSP	
RC		DRMA	
PAO		SCS	
SGA		ML	
ENF		File	

Mr. J. G. Keppler, Regional Administrator
Office of Inspection and Enforcement,
Region III
U. S. NUCLEAR REGULATORY COMMISSION
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

DOCKET NOS. 50-266 AND 50-301
ANNUAL RESULTS AND DATA REPORT
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Enclosed herewith are two copies of the Annual Results and Data Report for the Point Beach Nuclear Plant, Units 1 and 2, for the year 1983. This report is submitted in accordance with Technical Specification 15.6.9.1.B and contains information regarding steam generator inservice inspections, personnel occupational exposures, and descriptions of facility changes, tests, and experiments as required pursuant to 10 CFR Section 50.59(b).

Very truly yours,

C. W. Fay

Vice President-Nuclear Power

C. W. Fay

Enclosure

Copies to NRC Resident Inspector
Director, Office of Inspection and
Enforcement (40 copies)

MAR 5 1984

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