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*Energy to Serve Your World<sup>SM</sup>*

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Docket Nos. 50-321  
50-366

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

**Edwin I. Hatch Nuclear Plant**  
**Annual Operating Report for 1999**

Ladies and Gentlemen:

Enclosed is the Annual Operating Report for 1999 for Edwin I. Hatch Nuclear Plant Unit 1, Docket No. 50-321, and Unit 2, Docket No. 50-366. This report is submitted in accordance with the requirements of 10 CFR 50.59(b)(2) and Regulatory Guide 1.16.

Should you have any questions in this regard, please contact this office.

Respectfully submitted,

A handwritten signature in cursive script that reads "Lewis Sumner".

H. L. Sumner, Jr.

IFL/eb

Enclosure: 1999 Annual Operating Report for Edwin I. Hatch Nuclear Plant

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A001

**ENCLOSURE**

**EDWIN I. HATCH NUCLEAR PLANT - UNITS 1 AND 2**  
**NRC Docket Nos. 50-321 and 50-366**  
**Operating Licenses DPR-57 and NPF-5**

**ANNUAL OPERATING REPORT**  
**1999**

## TABLE OF CONTENTS

|  | <u>Page</u> |
|--|-------------|
| Glossary.....  | ii          |
| Introduction .....   | 1           |
| 10 CFR 50.59 Summaries for 1999                                  |             |
| Unit 1/Common As-Built Notices.....                              | 3           |
| Unit 2 As-Built Notices.....                                     | 5           |
| Unit 1/Common Design Change Requests.....                        | 7           |
| Unit 2 Design Change Requests.....                               | 18          |
| Requests for Engineering Assistance .....                        | 26          |
| Licensing Documents Change Requests .....                        | 27          |
| Minor Design Changes.....  | 38          |
| Temporary Modifications.....                                     | 41          |
| Setpoint Design Changes.....                                     | 48          |
| Plant Procedures.....  | 49          |
| Test or Experiment Requests.....                                 | 52          |
| Unit 1 and Unit 2 Core Operating Limits Reports .....            | 53          |
| Miscellaneous.....   | 54          |
| Data Tabulations and Unique Reporting Requirements               |             |
| Occupational Personnel Radiation Exposure for 1999.....          | 56          |
| Regulatory Guide 1.16 Information End of Year Report - 1999..... | 57          |

## GLOSSARY

### ACRONYMS AND ABBREVIATIONS

|          |  |
|----------|--|
| ABN      | as-built notice  |
| AC       | alternating current  |
| ADS      | automatic depressurization system  |
| AHU      | air handling unit  |
| ALARA    | as low as reasonably achievable  |
| APLHGR   | average power linear heat generation rate                                    |
| APRM     | average power range monitor  |
| ARI      | alternate rod insertion  |
| ARV      | air release valves   |
| ARTS     | average power range monitor, rod block monitor, and Technical Specifications |
| ASME     | American Society of Mechanical Engineers                                     |
| ATTS     | analog transmitter trip system   |
| ATWS     | anticipated transient without scram  |
| ATWS-RPT | anticipated transient without scram-recirculation pump trip                  |
|          |  |
| BHD      | bottom head drain  |
| BOC      | beginning of cycle   |
| BOP      | balance of plant   |
| BWR      | boiling water reactor  |
| BWROG    | Boiling Water Reactor Owners Group   |
|          |  |
| CFR      | Code of Federal Regulations  |
| CFUF     | cumulative fatigue usage factor  |
| COLR     | Core Operating Limits Report   |
| CRD      | control rod drive  |
| CS       | core spray   |
| CST      | condensate storage tank  |
| CUF      | cumulative usage factor  |
|          |  |
| DAS      | data acquisition system  |
| DBA      | design basis accident  |
| DBE      | design basis earthquake  |
| DC       | direct current   |
| DCB      | double cantilever beam   |
| DCR      | design change request  |
| DG       | diesel generator   |
| DHR      | decay heat removal   |
| dP       | differential pressure  |
| DoCR     | Document Change Request  |
| DOR      | Division of Operating Reactors   |
|          |  |
| EAL      | emergency action level   |
| ECCS     | emergency core cooling system  |

## GLOSSARY

### ACRONYMS AND ABBREVIATIONS

|         |  |
|---------|--|
| ECP     | electrochemical potential                                |
| EDG     | emergency diesel generator                               |
| EFCV    | excess flow check valve                                  |
| EFPD    | effective full power days                                |
| EFPH    | effective full power hours                               |
| EHC     | electrohydraulic control                                 |
| ELI     | Equipment Location Index                                 |
| EMI/RFI | electromagnetic interference/radiofrequency interference |
| EOC     | end of cycle   |
| EOC-RPT | end of cycle-recirculation pump trip                     |
| EPA     | Environmental Protection Agency                          |
| EPROM   | erasable programmable memory                             |
| EPU     | extended power uprate                                    |
| EDRD    | electronic direct reading dosimeter                      |
|         |  |
| FHA     | Fire Hazards Analysis                                    |
| FPC     | fuel pool cooling  |
| FSAR    | Final Safety Analysis Report                             |
|         |  |
| GE      | General Electric   |
| GL      | Generic Letter   |
| GPC     | Georgia Power Company                                    |
|         |  |
| HCU     | hydraulic control unit                                   |
| HNP     | Hatch Nuclear Plant                                      |
| HPCI    | high pressure coolant injection                          |
| HVAC    | heating, ventilation, and air-conditioning               |
| HWC     | hydrogen water chemistry                                 |
|         |  |
| I&C     | instrumentation and control                              |
| IE      | inspection and enforcement                               |
| IGSCC   | intergranular stress corrosion cracking                  |
| ILRT    | integrated leak rate test                                |
| IN      | information notice                                       |
| IRM     | intermediate range monitor                               |
| ISFSI   | independent spent fuel storage installation              |
| ISI     | inservice inspection                                     |
| IST     | inservice testing  |
|         |  |
| LCO     | limiting condition for operation                         |
| LDS     | leak detection system                                    |
| LLRT    | local leak rate test                                     |

## GLOSSARY

### ACRONYMS AND ABBREVIATIONS

|         |   |
|---------|---|
| LLS     | low-low set   |
| LOCA    | loss of coolant accident                                  |
| LOSP    | loss of offsite power                                     |
| LPAP    | low power alarm point                                     |
| LPCI    | low pressure coolant injection                            |
| LPM     | loose-parts monitor                                       |
| LPRM    | local power range monitor                                 |
| LPSP    | low power setpoint  |
| LUA     | lead use assemblies                                       |
|         |   |
| MAPLHGR | maximum average linear heat generation rate               |
| MCC     | motor control center                                      |
| MCCB    | molded-case circuit breaker                               |
| MCPR    | minimum critical power ratio                              |
| MCR     | main control room   |
| MCRECS  | main control room environmental control system            |
| MDC     | minor design change                                       |
| MER     | material evaluation report                                |
| MIC     | microbiologically influenced corrosion                    |
| MOV     | motor-operated valve                                      |
| MPL     | master parts list   |
| MSIV    | main steam isolation valve                                |
| MSL     | main steam line   |
| MSLRM   | main steam line radiation monitor                         |
| MSR     | moisture separator reheater                               |
|         |   |
| NMA     | noble metals addition                                     |
| NMS     | neutron monitoring system                                 |
| NPSH    | net positive suction head                                 |
| NRC     | Nuclear Regulatory Commission                             |
| NSSS    | nuclear steam supply system                               |
|         |   |
| ODA     | operator display assembly                                 |
| ODCM    | Offsite Dose Calculation Manual                           |
| OL      | operating limit   |
| OPDRV   | operations with the potential to drain the reactor vessel |
| OPRM    | oscillation power range monitor                           |
|         |   |
| PAM     | post accident monitoring                                  |
| PASS    | post accident sampling system                             |
| PBDA    | period-based detection algorithm                          |
| PCIS    | primary containment isolation system                      |
| PCIV    | primary containment isolation valve                       |

## GLOSSARY

### ACRONYMS AND ABBREVIATIONS

|                |  |
|----------------|--|
| PCM            | personnel contamination monitors       |
| P&ID           | pipng and instrumentation diagram      |
| PLC            | programmable logic controller          |
| PRB            | Plant Review Board                     |
| PRNM           | power range neutron monitor            |
| PSW            | plant service water                    |
| P/T            | pressure/temperature                   |
| QA             | quality assurance                      |
| RBM            | rod block monitor                      |
| RCIC           | reactor core isolation cooling         |
| RCPB           | reactor coolant pressure boundary      |
| RCS            | reactor coolant system                 |
| REA            | Request For Engineering Assistance     |
| RES            | Request For Engineering Services       |
| RFP            | reactor feed pump                      |
| RFPT           | reactor feed pump turbine              |
| RG             | Regulatory Guide                       |
| RHR            | residual heat removal                  |
| RHRSW          | residual heat removal service water    |
| RMCS           | reactor manual control system          |
| RPIS           | rod position indication system         |
| RPS            | reactor protection system              |
| RPT            | recirculation pump trip                |
| RPV            | reactor pressure vessel                |
| RRS            | reactor recirculation system           |
| RSCS           | rod sequence control system            |
| RTD            | resistance temperature detector        |
| RWBCCW         | radwaste building closed cooling water |
| RWCU or<br>RWC | reactor water cleanup                  |
| RWCS           | reactor water cleanup system           |
| RWE            | rod withdrawal error                   |
| RWM            | rod worth minimizer                    |
| SAER           | Safety Audit and Engineering Review    |
| SAT            | station auxiliary transformer          |
| SBGT or<br>SGT | standby gas treatment                  |
| SGTS           | standby gas treatment system           |
| SCM            | stress corrosion monitor               |
| SDC            | setpoint design change                 |

## GLOSSARY

### ACRONYMS AND ABBREVIATIONS

|          |  |
|----------|--|
| SDV      | scram discharge volume   |
| SED      | System Evaluation Document   |
| SJAE     | steam jet air ejector  |
| SLC      | standby liquid control   |
| SLMCPR   | safety limit minimum critical power ratio                            |
| SNC      | Southern Nuclear Operating Company                                   |
| SQUG GIP | Seismic Qualification Utility Group Generic Implementation Procedure |
| SRB      | Safety Review Board  |
| SR       | Surveillance Requirement   |
| SRM      | source range monitor   |
| SRV      | safety relief valve  |
| SSC      | system, structure, or component                                      |
| SSER     | supplemental safety evaluation report                                |
|          |  |
| TBWD     | thrust bearing wear detector   |
| TER      | test or experiment request   |
| TCV      | turbine control valve  |
| THV      | torus hardened vent  |
| TIL      | Technical Information Letter   |
| TIP      | traversing incore probe  |
| TLD      | thermoluminescent dosimeter  |
| TRM      | Technical Requirements Manual  |
| TSV      | turbine stop valve   |

## INTRODUCTION

The Edwin I. Hatch Nuclear Plant is a two-unit facility located approximately 11 miles north of Baxley, Georgia, on U.S. Highway No. 1. The plant consists of two light water reactors. Unit 1 is currently licensed to operate at 2763 MWt, and Unit 2 is currently licensed to operate at 2763 MWt. The maximum dependable capacity at the end of 1999 on Unit 1 was 838 net MWe. The maximum dependable capacity for 1999 on Unit 2 was 855 net MWe.

General Electric furnished the boiling water reactor, the nuclear steam supply system, the turbine, and the generator for both units. The plant was designed by Southern Company Services, Inc., with assistance provided by Bechtel Power Corporation. The condenser cooling method employs induced-draft cooling towers and recirculating water systems with normal makeup supplies drawn from the Altamaha River.

The plant is a co-owned facility with ownership delegated as follows:

|  |       |
|--|-------|
| Georgia Power Company                      | 50.1% |
| Oglethorpe Electric Membership Cooperative | 30.0% |
| Municipal Electrical Authority of Georgia  | 17.7% |
| City of Dalton, Georgia                    | 2.2%  |

Licensing information for the units is as follows:

|                         | <u>Unit 1</u>     | <u>Unit 2</u>    |
|-------------------------|-------------------|------------------|
| Docket No.              | 50-321            | 50-366           |
| License Issued          | 08/06/74 (DPR-57) | 06/13/78 (NPF-5) |
| Initial Criticality     | 09/12/74          | 07/04/78         |
| Initial Synchronization | 11/11/74          | 09/22/78         |
| Commercial Operation    | 12/31/75          | 09/05/79         |

Southern Nuclear Operating Company has sole responsibility for overall planning, design, construction, operation, maintenance, and decommissioning of the Edwin I. Hatch Nuclear Plant.

**10 CFR 50.59 SUMMARIES FOR 1999**

## UNIT 1/COMMON AS-BUILT NOTICES

**97-0074, Rev. 0**

This change replaces specified Hancock Figure 5500W globe valves in the auxiliary drains and vent system (1N22) with equivalent Mogas C-1 ball valves to reduce total radwaste inleakage as a result of valve seat leakage. This change does not modify the function/operation of the auxiliary drains and vent system as this change is an equivalent valve replacement.

The auxiliary drains and vent system (1N22) is not safety related. This change from Hancock Figure 5500W globe valves to equivalent Mogas C-1 ball valves does not challenge and has no adverse effect on the auxiliary drains and vent system or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-0161, Rev. 0**

This change adds pressure indicator symbols and their MPL nos. (1N21-R098A&B) to the Gezip skid drawing on P&ID H-11604. Also added per this ABN were MPL nos. for existing symbols for pressure recorder 1N21-R905 and temperature recorder 1N21-R912. This change does not modify the function or operation of the Gezip skid system.

The Gezip skid system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-0228, Rev. 0**

This change modifies the fire protection suppression system numbers and fire extinguisher locations on some FHA drawings to allow for more accurate representation of as-found conditions. This change does not modify operation of these systems or equipment, because the modifications are editorial in nature.

The affected fire suppression systems and extinguishers are not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**99-0125, Rev. 0**

This change modifies the CRD system P&IDs to eliminate a discrepancy between the P&IDs and the as-built configuration. This change does not modify the function or operation of this system by revising the design drawings to reflect the as-built and desired design configuration of the CRD system piping. The P&IDs depicted a loop seal in the piping between the hydraulic control unit and the scram discharge header, but a walkdown determined the pipe to be a straight section. It was determined that the P&ID was developed from a GE-supplied drawing that reflected a GE design for plants of an older vintage than Plant Hatch. The older design had the loop seal,

**UNIT 1/COMMON AS-BUILT NOTICES**

because the SDV was on the floor at a lower level and the loop seal was required to keep air out of the line. Subsequent designs, such as Hatch, have the SDV above the HCU outlet valve; thus the piping is continuously "water sealed" without the need for a loop seal.

The CRD system is safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

UNIT 2 AS-BUILT NOTICES

**97-0099, Rev. 0**

This change revised P&ID H-21056 to depict existing: 1) valves on the 2N22-A005A/B drain tanks lines associated with level switches 2N22-LS-N367A/B and 2N22-LS-N368A/B; 2) instrument root valves associated with pressure indicators 2N22-PI-R327A/B; 3) drain valves teeing off the 2-in. line between the 2N11-F037A/B and 2N11-F040A/B valves; and 4) the MPL nos. for each of these valves. This change to correctly depict the configuration of these components and associated piping does not modify the function or operation of the SJAE system.

The auxiliary drains and vents system (2N22), the main steam system (2N11), and their associated components are not safety-related. This change to correctly depict the configuration of the above-mentioned components does not challenge and has no adverse effect on these systems or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-0222, Rev. 0**

This change modifies the reactor building 600/208-V ac MCC 2C MPL no. 2R24-S011 to eliminate the spare starter and breaker in frame 18B1. This change does not modify the function or operation of this system.

The reactor building 600/208-V ac MCC is safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-0254, Rev. 0**

This change revises sheet 1 of turbine building service water system P&ID H-21033 to document the existence of the quick disconnects downstream of the Division 1 and Division 2 supply headers drain valves 2P41-FD047 and 2P41-FD049. This change to add the quick disconnects to the P&ID provides a more accurate depiction of the PSW system piping configuration and does not modify the function or operation of the PSW system.

The portion of the PSW system located in the turbine building that is affected by this ABN is not safety related. This change does not challenge and has no adverse effect on the PSW system or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-0310, Rev. 0**

This change modifies the PSW system piping supplying cooling water to RWBCCW heat exchanger 2G11-B007. The modification consists only of changing the depiction of the 2G11-B007 service water supply and return isolation valves 2P41-F801 and 2P41-F804 to

## UNIT 2 AS-BUILT NOTICES

normally closed in lieu of normally open. The RWBCCW heat exchanger is normally out of service and is only used when an alternative source of dilution flow is required for radwaste discharges. This usually occurs during an outage. This change does not modify the function or operation of this system as these valves are normally maintained closed because any PSW flow diverted through heat exchanger 2G11-B007 cannot be used to cool other plant components.

RWBCCW heat exchanger 2G11-B007, the associated service water supply, and return isolation valves 2P41-F801 and 2P41-F804 are not safety related. Changing the depiction of these valves to normally closed does not challenge and has no adverse effect on the PSW system, radwaste system, or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**99-0052, Rev. 0**

This change modifies the position of condenser vacuum root valves 2N61-F062A/B and 2N61-F063A/B from normally closed to normally open. These valves only need to be closed when it is necessary to isolate test line connection valves TV1 for maintenance. This change will eliminate exposing personnel to dose and radiation exposure each time it is necessary to utilize the condenser performance monitoring test connections. This change does not modify the function or operation of the condenser or condenser performance monitoring system. Double isolation of the test line is not required. The test line connection valves are normally closed and capped. These test line connection valves are only opened after test equipment is connected for monitoring the performance of the condenser.

Condenser vacuum root valves 2N61-F062A/B and 2N61-F063A/B and the condenser performance monitoring test connections are not safety related. Changing these valves from normally closed to normally open does not challenge and has no adverse effect on the condenser or condenser performance monitoring system or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**99-0337, Rev. 0**

This change replaces the HFB-5 amp magnetic-only MCCB in frame 22C of MCC 2R24-S012 that feeds station battery room exhaust fan 2Z41-C015 to allow the fan to start and operate properly. This change does not modify the function or operation of the ventilation system or the electrical station auxiliary system by replacing the existing breaker with an HFB 10-amp breaker.

The MCC is safety related. The exhaust fan, while important to safety, does not perform a safety-related function. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**91-195, Rev. 0**

This change replaces torus water temperature monitoring DOR qualified RTDs with RTDs qualified per 10 CFR 50.49 due to obsolescence. This change does not modify the function of the torus water temperature Monitoring system.

The torus water temperature monitoring system RTDs are safety related. Replacing the RTDs will have no adverse effect on any safety-related system or component and will not reduce the margin of safety as defined in the basis for any Technical Specification.

**92-126, Rev. 0**

This change replaces the valve disc of RHR system MOVs 1E11F027A&B with a stronger replacement disc to accommodate the valves' maximum thrust limit. This change does not modify the function or operation of this system but does provide a means for the valve to operate within established thrust criteria.

RHR valves 1E11F027A&B are safety-related components. The disc replacement has no adverse effect on the RHR system or any other safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**93-040, Rev. 0**

This change modifies the condensate and feedwater system booster and reactor feed pump minimum flow control switches power supply to provide a more reliable power source. It also replaces the dP controller for the SJAE condensate flow to improve automatic operation. This change does not modify the function of this system.

The condensate and feedwater system is not safety related. This modification has no adverse effect on the condensate and feedwater system or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**93-048, Rev. 0**

This change modifies the condensate demineralizer system air surge backwash and body feed equipment to improve performance of the system operation and reduce the amount of radioactive waste generated and processed as a byproduct of this system. This change modifies the operation of this system by replacing the condensate demineralizer system control panel with a new PLC-based control panel. Also, the low pressure air blower backwash equipment is replaced with equipment which provides a high pressure air backwash technique for the condensate demineralizer vessels. The demineralizer system holding pumps are replaced to support a change

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

to larger Powdex vessel elements. A modification is made to the body feed system operation to reduce the potential of line blockage from hardening of the body feed slurry.

The condensate demineralizer system is not safety related. This modification has no adverse effect on any safety-related system or component and to the condensate demineralizer system does not reduce the margin of safety as defined in the basis for any Technical Specification.

**94-044, Rev. 0**

This change modifies the fire area separation configuration to facilitate the removal of Thermo-Lag throughout the plant. Thermo-Lag is a material originally used as a fire barrier but was later determined to be combustible in nature.

The reconfiguration of fire areas for Appendix R separation requires realignment of some safe shutdown paths and is considered a safety-related activity. This action has been thoroughly evaluated and found to have no adverse effect on any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**95-038, Rev. 0**

This change removes the Unit 1 radwaste drumming system portion of the decommissioned radwaste system and performs support systems and architectural modifications to allow the addition of a "Hot" toolroom facility for contaminated tool storage, issue, return, and decontamination. This change does not modify the function of the operating radwaste system. This change modifies the non-seismic radwaste building structure by removing temporary walls, cutting new openings in permanent walls, and making stair modifications. Modifications to support systems do not affect any safety-related function or operation of the radwaste, instrument air, HVAC, demineralized water, or decontamination system.

The affected portion of the radwaste system and its support systems is not safety related; the only safety-related function of the radwaste system is containment isolation. This change does not challenge any system or component required for safe shutdown and does not challenge containment integrity. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**95-046, Rev. 0**

This change adds heat tracing to H<sub>2</sub>O<sub>2</sub> analyzer system 1P33 sample lines and relocates oxygen analyzer panel 1P33-P006. The purpose of this modification is to eliminate moisture buildup from condensation in the sample lines. This change does not modify the function of this system.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

The 1P33 system is safety related. The addition of heat trace to the sample lines has no adverse effect on this or any other safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specifications.

**95-071, Rev. 0**

This design change modifies the nominal setpoint for mechanical SRV actuation for all 11 main steam system 2B21 SRVs to 1150 psig. GE perform an analysis of the proposed setpoint change per reference 3 of this 50.59 evaluation. NRC approval of a Technical Specification change will be required prior to implementation of this design change. The GE review determined that the response, availability, and operation of the ECCS, ATWS systems, HPCI system, RCIC system, and SRV piping and T-quenchers will not be adversely affected because of this design change. The ability of the safety-related systems, such as HPCI and RCIC, to perform their safety function is not adversely affected due to this design change. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-001, Rev. 0**

This change replaces the offgas hydrogen analyzer to eliminate maintenance problems with the existing obsolete monitor. This change does not modify the function of this system.

The offgas hydrogen analyzer is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-005, Rev. 0**

This change modifies MOVs 1B21-F016, 1B21-F019, 1B31-F031A&B, 1E11-F011A&B, 1E41-F001, 1E41-F002, 1E41-F007, 1E51-F013, 1E51-F524 and 1G31-F001 per the requirements of NRC GL 89-10. This change provides the necessary assurance that safety-related MOVs will be able to function, either opening or closing, when subjected to the maximum worst-case dP across the valve during normal operation and abnormal events within the design basis of the plant. There will be no overall change to any equipment function or system operation with this modification.

The above MOVs are safety related. This modification will not change any overall equipment function or have an adverse effect on any safety-related system. GL 89-10 modifications will not reduce any margin of safety as defined in the Technical Specifications.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**96-008, Rev. 0**

This change replaces the Carrier low-pressure CFC refrigerant based chillers with York high-pressure non-CFC based refrigerant chillers and adds new cooling towers and condenser pumps in the Unit 1 turbine building chilled water system to eliminate problems with aging equipment. This change does not modify the function of the Unit 1 turbine building chilled water system.

The Unit 1 turbine building chilled water system is not safety related. This change has no adverse effect any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-010, Rev. 0**

This change adds a temporary chilled water system consisting of two air-cooled chillers and a recirculation pump as backup to the Unit 1 turbine building chilled water system to enable replacement of the Carrier chillers with York chillers. The chiller replacement work will be done with DCR 96-008. The chiller replacement work is scheduled for cooler months, and thus the cooling capacity of the temporary system is less than the actual capacity of the existing system. This change does not modify the function of the Unit 1 turbine building chilled water system as this temporary system will continue to provide the necessary chilled water to the various areas coolers in the turbine building during the chiller replacement activities.

The temporary chilled water system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-029, Rev. 0**

This change modifies the condensate feedwater system to eliminate leakage in long-cycle cleanup isolation valves 1N21-F027A/B. This change modifies the operation of this system by adding an additional isolation valve.

The condensate feedwater system is not safety related. This proposed modification has no adverse effect on the any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-033, Rev. 0**

This change modifies Path 3 MOVs to eliminate potential hot shorts (individual conductors within the same cable shorting together) from jeopardizing remote shutdown operations in the event of a MCR fire. This change does not modify the function and/or operation of the MOVs.

**UNIT 1/COMMON DESIGN CHANGE REQUESTS**

The remote shutdown system is safety related; however, this change has no adverse effect on remote shutdown system operation. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-037, Rev. 0**

This modification changes DG 1A from the original blower-turbo arrangement to the newer and improved turbo-blower series arrangement used on the 1B, 1C, and Unit 2 DGs. The turbo-blower series arrangement will reduce exhaust smoke, lower exhaust temperatures, and reduce piston and liner temperatures. This results in longer engine life through decreased wear. This change does not modify the function or operation of the DG. The modification to the DG will also require air intake piping changes similar to the 1B, 1C, and Unit 2 DG piping.

DG 1A and its intake piping are safety related. The modification has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-038, Rev. 0**

This modification changes DG 1C from the original blower-turbo arrangement to the newer and improved turbo-blower series arrangement used on the 1B and Unit 2 DGs. The turbo-blower series arrangement will reduce exhaust smoke, lower exhaust temperatures, and reduce piston and liner temperatures. This results in longer engine life through decreased wear. This change does not modify the function or operation of the DG. The modification to the DG will also require a modification to the air intake piping to be similar to the 1B and Unit 2 DG piping.

DG 1C and its intake piping are safety related. The modification has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-045, Rev. 0**

This change adds signal inputs to the process computer to allow the process computer to monitor points affected by power uprate. This change does not modify the function of the process computer system or the power uprate operation.

The process computer system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**96-048, Rev. 0**

This change modifies the ATTS, nuclear boiler system, RPS, and NMS process setpoints in support of EPU operation. This change modifies the existing NUMAC APRMs and APRM ODA firmware (software embedded on EPROMs) to allow separate flow-biased simulated thermal power alarm and trip slope values to be entered and displayed and correct minor problems with the original firmware.

The ATTS, nuclear boiler system, RPS, and NMS are safety-related. The process setpoint and APRM/ODA firmware changes have no adverse effect on any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-049, Rev. 0**

This change replaces the radiochemistry fumehoods, the associated exhaust ductwork, and the fumehood exhaust fan to allow proper functioning of the system. This change does not modify the function and operation of this system. The original system layout and system control features are not affected by this change.

The radiochemistry fumehood exhaust system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-053, Rev. 0**

This change replaces Unit 1 DG KW/KVAR meters 1R43-R601A,B,&C and watt-var transfer switches with a separate wattmeter and varmeter for each DG in order to simplify the task of tying a DG to the grid. The control switches and lights for PSW system turbine building isolation valves 1P41-F310A,B,C,&D and DG battery voltmeters 1R43-R615A,B,&C and ground lights are moved to new positions on the panel to make room for the new meters and also make the Unit 1 panel look similar to the Unit 2 panel. The wattmeters and voltmeters are RG 1.97 components. This change does not modify the function of this system by adding the new meters, because the operator still can read kilowatts, kilovars, and volts. The improvement is that he is able to read KW or KVAR without having to operate a transfer switch.

The DG KW/KVAR meters, battery voltmeters, and PSW turbine building isolation valve control switches are safety related. The change has no adverse effect on the DG system, the DG battery system, the PSW system, the PASS, or any other safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**97-005, Rev. 1**

NRC GL 96-06 identified the safety-significant issue of thermally induced pressurization of isolated water filled piping sections in containment which could potentially jeopardize the ability of accident-mitigating systems to perform their safety functions and could lead to a breach of primary containment integrity via bypass leakage. This design change provides for a 3/4-in. relief path via a check valve installed in a bypass around the containment isolation valve for the RHR system normal shutdown cooling path. The check valve will preclude overpressure in the isolated section of pipe following a DBA. In addition, this design change provides for a relief valve, between the containment penetration and discharge piping from the drywell equipment and floor drain sump pumps, routed back to the sump to relieve pressure in the isolated section of piping following a DBA.

The modified portion of piping for the RHR shutdown cooling path and the drywell equipment and floor drain systems perform the safety-related function of containment isolation. The installation of the relief path on the RHR shutdown cooling line and relief valves on the drywell equipment and floor drain systems will ensure the pressure integrity of the associated containment penetrations following a DBA. Hence, the proposed change does not challenge or adversely affect any of the safety-related functions associated with containment isolation. It also does not change, degrade, or prevent actions described or assumed in the accident analyses. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-011, Rev. 0**

This change adds seismic restraints for the racked out 4-kV breakers in switchgear 1R22-S005, 1R22-S006, 1R22-S007, 2R22-S005, 2R22-S006, and 2R22-S007 to eliminate the potential for relay contact chatter due to seismic interaction. This change does not modify the function or operation of this system.

The R22 system is safety related. The change does not challenge the R22 system. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-028, Rev. 0**

This change replaces the existing GE manual/automatic controllers for flow control valves 2E11 F068A&B at the RHRSW heat exchanger with manual throttling switches. The automatic control function for the valves will be eliminated. This change modifies the operation of the system as the automatic control mode for the flow control valves will no longer exist.

The RHRSW system is safety related. This modification does not challenge or adversely affect the RHRSW system or any other safety-related system or component. Operations personnel will have safety-related indication at MCR panel 2H11-P601 of RHRSW heat exchanger dP. This indication will alert operations personnel to throttle the valve position as required, maintaining

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

the required dP. Also, an alarm will sound when the dP drops below 15 psi. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-033, Rev. 0**

This change replaces existing MSR 1<sup>st</sup> and 2<sup>nd</sup> stage reheater drain check valves N22-F052A, F044A, F044B & F042B with new nozzle check valves to eliminate potential heater flooding, turbine water induction, and excessive heat loss due to valve binding. Additionally, the existing valves have been seal welded, thus preventing further inspection and maintenance. This change does not modify the function or operation of the MSR and reheater drain system.

The MSR drain system and subject check valves are not safety related. This change does not challenge any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-034, Rev. 0**

This change replaces the EDG stator temperature monitors due to the old equipment being obsolete. This change does not modify the function or operation of this system.

The new stator temperature monitoring equipment is not safety related. This change has no adverse effect on the EDG system or other any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-039, Rev. 0**

This change modifies MOVs 1E11-F007A&B, 1E11-F009, 1E11-F015A&B, 1E11-F028A&B, 1E21-F031A, 1E41-F003, 1E51-F008, 1E51-F524, 1G31-F001, and 1G31-F004 for the requirements of NRC GL 89-10. There will be no overall change to any equipment function or system operation.

The above MOVs are safety related. These modifications will not change any overall equipment function or have an adverse effect on any safety-related system. GL 89-10 modifications will not reduce any margin of safety as defined in the Technical Specifications.

**97-051, Rev. 0**

This change modifies the condensate booster pump and feedwater pump system and recirculation system runback logic for EPU conditions and enhances the systems' ability to allow an extra 5% flow. This modification will have no impact on the present requirements for the feedwater system, recirculation system, or heater drain system. There is no adverse effect on instrument channel response time, trip accuracy, or any plant transient response as defined in the Technical Specifications. The equipment being installed by this DCR is nonsafety related. This

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

modification will enhance the heater drain and feedwater control systems during extended uprated conditions by providing a faster recirculation runback response to loss of a feedpump and reduce the demand on feedflow when a low NPSH occurs to either the condensate booster pump or reactor feedpump by reducing the recirculation core flow (runback).

The feedwater control system (C32), recirculation flow control system, and heater drain system are nonsafety-related systems. No new failure mode that can cause the failure of equipment important to safety exists as a result of this modification.

**97-054, Rev. 0**

This change modifies the mounting location of main steam system (1N11) pressure transmitters 1N11-N042A and 1N11-N042B to eliminate the transmitters being located in a high-temperature, radiological environment. This change does not modify the operation of this system by moving the transmitters' mounting location.

The main steam system pressure transmitters are not safety related. This change has no adverse effect on the main steam system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-055, Rev. 0**

This change replaces RPIS power supplies 1C11-S003A&B and 1C11-S004A&B to eliminate failure of obsolete power supplies. This change does not modify the operation of this system by replacing 1C11-S003A&B and 1C11-S004A&B.

The RPIS power supplies 1C11-S003A&B and 1C11-S004A&B are not safety-related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-059, Rev. 0**

This change adds struts and deletes snubbers to the Unit 1 feedwater system piping in reactor building - side "A" (B21), feedwater system piping in reactor building - side "B" (B21), primary steam - condensate drainage system (B21), and side "B" CS (E21). These changes do not modify the function or operation of these systems.

These systems are safety related. Deleting snubbers and replacing some with rigid struts has been reviewed for applicable codes and standards and found acceptable. This does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**98-004, Rev. 0**

This change replaces the existing turbine building entrances at T-16 (Unit 1) and T-17 (Unit 2) to allow an increase in the number of personnel who pass through the PCMs during an outage. This change does not modify the function or operation of these buildings.

These buildings are not safety related. They serve as entrance and exist points to the Unit 1 and Unit 2 turbine building from the east side of the plant. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-005, Rev. 0**

This change adds a flange on penetrations X28F, X31D, X33C, X217, X221A, and X221C to eliminate the use of temporary test plugs. This change also adds a plate support to penetrations X31 (if required) and X33 to better support the piping. This change does not modify the function or operation of any system.

The flanges are safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-014, Rev. 0**

This change replaces 600: 208/120-V ac transformers R11-S004 and R11-S006 to eliminate an undervoltage condition without causing an unacceptable overvoltage condition. This change does not modify the function of this system.

The 600: 208/120-V ac transformers R11-S004 and R11-S006 are safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-019, Rev. 0**

This change replaces the generator stator cooling water conductivity monitoring equipment (1N43-N760 & N761) due to the existing equipment being obsolete. This change makes a minor modification to the operation of this system by adding an equipment failure input to the high conductivity annunciator.

The generator stator cooling water system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 1/COMMON DESIGN CHANGE REQUESTS

**98-060, Rev. 0**

This change adds: 1) minute amounts of noble metal on all wetted reactor components to eliminate incore stress corrosion and 2) limited conductivity indication to the chemistry data acquisition system. This change does not modify the operation of this system.

The reactor vessel internals are safety related. The NobleChem application does not challenge any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-061, Rev. 0**

This change adds two Class 1E series fuses to associated division I lighting circuit R25-S083-L06 in panel 1H11-P617 interrupting lighting circuits R25-S083-L06A, B, C, D, E and F to eliminate the possibility of a fault on the lighting circuits causing cable overheating to the point that damage can occur on Division II safety-related wiring that might be too close to the lighting wiring in the panels and the Division I circuits routed with the lighting circuits. This change does not modify the operation of this system.

The lighting circuits are not safety-related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**99-016, Rev. 0**

This change replaces the RWCU 1G33-F039 check valve in order to meet LLRT criteria. This change does not modify the operation of this system.

The F039 check valve is safety-related. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**99-017, Rev. 0**

This change adds typical lifting lug details to allow installation in the plant as required. This change does not modify the function and/or operation of the plant.

Lifting lugs are not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 2 DESIGN CHANGE REQUESTS

**89-211, Rev. 0**

This change modifies the (2P41) service water system discharge check valves for RHR and CS room coolers by removing the internals of valves 2P41-F025A/B and 2P41-F026A/B. INPO SOER 86-3 for review of check valves and the report issued in response to REA HT-8707 recommended the removal of internals or inspection of several check valves. The internals removal option is exercised with this DCR. This change does not modify the function or operation of the 2P41 system. This change eliminates the possibility of malfunction of these valves and no new accident scenarios are created by this change.

The Unit 2 service water system is safety related. Removal of the valve internals for 2P41-F025A/B and 2P41-F026A/B has no adverse effect on the service water system or any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**94-036, Rev. 0**

This change provides new process setpoints for instrumentation associated with the nuclear boiler, feedwater control, HPCI, and RCIC systems to support a permanent amendment to the operating license of Unit 2 for a maximum power level of 2558 MWt, a 5% increase over the original power level of 2536 MWt. At power uprate conditions, RPV pressure will increase approximately 30 psi, and steam and feedwater flow will increase approximately 6% to accomplish a 5% increase in RTP. This modification revises setpoints and calibration endpoints for the instrumentation affected by the power uprate operating parameters. This change does not affect the function, operability, or logic of the systems as addressed in the FSAR.

The nuclear boiler, feedwater control, HPCI, and RCIC systems are safety related. This change has no adverse effect on these safety-related systems or components. A detailed Power Uprate Safety Analysis Report for E. I. Hatch Nuclear Plants Units 1 and 2 was performed by GE to support the increased power level and aid in support of this modification. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**95-020, Rev. 0**

This change modifies the CRD undervessel platform to provide a safer and more efficient work surface. This change does not modify the function or operation of this system.

The CRD undervessel platform is not functionally safety related. It is designed to Seismic Category I requirements and, therefore, has no adverse effect on any safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 2 DESIGN CHANGE REQUESTS

**95-057, Rev. 0**

This change modifies the Unit 2 turbine building chillers to allow replacement of the refrigerant R12 with non-CFC refrigerant R134a while maintaining their cooling capacity. This change does not modify the function or operation of this system.

The Unit 2 turbine building chilled water system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-006, Rev. 0**

This change modifies MOVs 2B21-F021, 2B31-F031A&B, 2E11-F007A&B, 2E11-F009, 2E11-F024A&B, 2E11-F119A, 2E41-F007, 2E41-F041, 2E41-F042, 2E51-F022, 2E51-F524, 2G31-F001, and 2T49-F004B for the requirements of NRC GL 89-10. This provides the necessary assurance that safety-related MOVs will be able to function, either opening or closing, when subjected to the maximum worst-case dP across the valve during normal operation and abnormal events within the design basis of the plant. There will be no overall change to any equipment function or system operation with these modifications.

The above MOVs are safety related. These modifications will not change any overall equipment function or have an adverse effect on any safety-related system. GL 89-10 modifications will not reduce any margin of safety as defined in the Technical Specifications.

**96-031, Rev. 0**

This change replaces the selected GE safety-related HGA & HFA dc relays, which are very sensitive to high-resistance ground faults in the system. Per NRC IN 94-80, these relays have the potential for inadvertent operation due to high-resistance ground faults. The new modified HGA and HFA relays are less sensitive to ground faults, i.e., these relays require much higher dropout voltage and dropout current. This change does not modify the function or the operation of any system.

The replacement HGA and HFA relays are safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-034, Rev. 0**

This change retires Unit 2 LPCI inverters 2R44-S002 and 2R44-S003 feeding power to LPCI valve MCCs 2R24-S018A and B. Power to these MCCs is provided from a combination of Unit 1 600-V ac load centers backed by the dedicated Unit 1 DGs and the Unit 2 600-V ac MCC backed by swing DG 1B. There is no change to the operation of the valves served by the LPCI valve MCCs.

## UNIT 2 DESIGN CHANGE REQUESTS

The power sources for the LPCI valve MCCs are safety related. These power sources do not adversely affect the operation of any equipment connected to the LPCI valve MCCs. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-041, Rev. 0**

This change replaces the RHR and CS systems' pump suction strainers with higher-capacity strainers. These systems are low-pressure ECCSs. These new strainers will be sized such that there will be adequate NPSH for continued operation of these pumps after a design basis LOCA. This change does not modify the function or operation of these systems. This design change was initiated in response to NRC Bulletin 96-03.

The RHR and CS pump suction strainers (which have no MPL no.) are safety related. The modification has no adverse effect on the RHR system, CS system, or any other safety-related system or component. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-046, Rev. 0**

This change replaces the MSL flow transmitters to allow a higher steam flow of up to 183 psid. This change does not modify the function of this system, although it does allow a higher steam flow before signaling a line break..

The MSL flow transmitters are safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**96-047, Rev. 0**

This change modifies the ATTS, nuclear boiler system, RPS, and NMS process setpoints in support of EPU operation. This change modifies the existing NUMAC APRMs and APRM ODA firmware (software embedded on EPROMs) to allow separate flow-biased simulated thermal power alarm and trip slope values to be entered and displayed and correct minor problems with the original firmware.

The ATTS, nuclear boiler system, RPS, and NMS are safety-related. The process setpoint and APRM/ODA firmware changes have no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 2 DESIGN CHANGE REQUESTS

**96-054, Rev. 0**

This change modifies the phase connection of the reverse power relay for the Unit 2 DGs to reduce nuisance operation of the relay which is attributed to current imbalances and harmonics. This change does not modify the function of the DG system or protective relaying. The reverse power relay will maintain the original design to monitor and protect the DGs from reverse power conditions.

The DG reverse power relay is safety related. This change has no adverse effect on the DG system or the design of the DG to perform its safety-related function. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-007, Rev. 0**

This change modifies the Unit 2 drywell chiller to allow changeout of the CFC refrigerant R12 with HFC refrigerant R134a. In addition, the aging controls on the chiller are being replaced with microprocessor-based controls. Also, duct modifications are being made to allow exhaust from the drywell chiller room. This change does not modify the function or operation of the drywell chilled water system.

The drywell chiller and ventilation system in the chiller room are not functionally safety related. The safety-related service water supply to the chiller condenser is not affected by this change. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-017, Rev. 0**

This change modifies the Appendix R safe shutdown MOVs to mitigate potential hot shorts (individual conductors within the same cable shorting together) from jeopardizing safe shutdown operations in the event of a fire. This change does not modify the function and/or operation of the MOVs.

The MOVs being modified are safety related; however, this change has no adverse effect on component or system operation. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-023, Rev. 0**

This change modifies PSW valves 1P41-F420A&B and 1P41-F421A&B from a limit close to torque close operation. This change will make the wiring the same as a typical globe valve. This change does not modify the function of the PSW system .

PSW valves 1P41-F420A&B and 1P41-F421A&B are safety related. This design change has no adverse effect on the 1P41 PSW system or any other safety-related system or component. This

## UNIT 2 DESIGN CHANGE REQUESTS

design change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-029, Rev. 0**

This change replaces the existing GE manual/automatic controllers for flow control valves 2E11-F068A&B at the RHRSW heat exchanger with manual throttling switches. The automatic control function for the valves will be eliminated. This change modifies the operation of the system as the automatic control mode for the flow control valves will no longer exist.

The RHRSW system is safety related. This modification does not challenge or adversely affect the RHRSW system or any other safety-related system or component. Operations personnel will have safety-related indication at MCR panel 2H11-P601 of RHRSW heat exchanger dP. This indication will alert operations personnel to throttle the valve position as required maintaining the required dP. Also, an alarm will sound when the dP drops below 15 psi. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-036, Rev. 0**

This change replaces the obsolete Edison Omniguard temperature monitoring system on the 2R43 system with Yokogawa paperless recorders. This change is a functionally equivalent replacement and does not modify the operation of the DG system to perform its intended function.

The paperless recorders are not safety related. The recorders perform no control action and have been evaluated for EMI/RFI concerns. This modification will have no adverse effect on any safety-related system or component and will not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-040, Rev. 0**

This change modifies MOVs 2E11-F008, 2E11-F009, 2E11-F119A&B, 2E41-F002, 2E51-F045, 2P41-F316A-D, 2T49-F001A&B, 2T49-F002A&B, 2T49-F003A&B, 2T49-F004A, 2T49-F005A&B, and 2T49-F006A&B for the requirements of NRC GL 89-10. There will be no overall change to any equipment function or system operation with these modifications.

The above MOVs are safety related. These modifications will not change any overall equipment function or have an adverse effect on any safety-related system. GL 89-10 modifications will not reduce any margin of safety as defined in the Technical Specifications.

## UNIT 2 DESIGN CHANGE REQUESTS

**97-049, Rev. 0**

This change modifies the recirculation runback logic to ensure the condensate and feedwater system can provide a reliable steady-state supply of feedwater at uprated reactor power conditions. This change modifies the operation of the recirculation system by adding a new runback (approximately 70% core flow) due to low condensate booster pump suction pressure or reactor feedpump suction pressure. The existing runback logic that initiates on loss of feedpump is also modified.

The recirculation system and the condensate and feedwater system are not safety related. This change has no adverse effect on the any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-050, Rev. 0**

This change increases the PSW flow rate to the isophase bus duct cooling system to 160 gal/min and the stator water cooling system from 1750 gal/min to 1880 gal/min at 95°F to remove the additional heat from the isophase bus duct and the stator due to the increased heat load from the bus duct and the stators resulting from the increase in the generator rating. Also, it increases the stator bar cooling water flow rate to 550 gal/min, change the calibration span for 1N38-N768 and -769 to 1010 psia, and the setpoint for 1N38-N777 to 24 psig. This change does not modify the function or operation of these systems. Also, the L-shaped aluminum bars used as connectors at the generator will be replaced with flexible copper braided connectors to improve reliability and reduce maintenance of the connectors.

The isophase bus duct cooling system, the stator water cooling system, and the MSR reheat system are not safety related. This change ensures the isophase bus duct cooling system and the stator cooling water system are capable of reliable operations at extended power uprate heat loads and improves the operation of the second-stage reheater steam feed control system. This change has no adverse effect on the systems. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-056, Rev. 0**

This change replaces RPIS power supplies 2C11-S003A&B and 2C11-S004A&B to eliminate failure of obsolete power supplies. This change does not modify the operation of this system.

RPIS power supplies 2C11-S003A&B and 2C11-S004A&B are not safety-related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

## UNIT 2 DESIGN CHANGE REQUESTS

**97-057, Rev. 0**

This change adds ECP sensors to the five LPRM assemblies and bottom-head drain flange as part of the HWC system to allow for incore corrosion monitoring. This change does not modify the function or operation of this system.

The HWC system is not safety related. This modification does not challenge and has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-058, Rev. 0**

This change adds struts and deletes snubbers in the RHR system discharge through heat exchanger and CS system side A & B pump suction from the torus and the CST. These changes do not modify the function or operation of the system.

The RHR heat exchanger and CS pump suction are safety related. Deleting snubbers and replacing some with rigid struts were reviewed for applicable codes and standards and found acceptable. This does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-064, Rev. 0**

This change modifies the condensate feedwater system to install an isolation valve in the 10-in. minimum flow line for Unit 2 condensate booster pump 2N21C002A. The valve will be installed between the 18-in. pump discharge line and the minimum flow header. The valve will be a normally open valve that will be closed only for maintenance to isolate the pump from the minimum flow header. This change does not modify the function or operation of this system.

The condensate feedwater system is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**97-065, Rev. 0**

This change replaces motor-operated backwash isolation valves 1P41-F313C&D and adds manual backwash isolation valves for the Unit 2 PSW strainers 2P41-D001A&B. The 6-in. butterfly valves will be replaced with 4-in. ball valves. Replacing the butterfly valves will reduce valve maintenance frequency and associated bypass leakage around these valves. This change does not modify the operation of the PSW system strainers.

The Unit 2 PSW strainers and the backwash valves being replaced are safety related. This design change has no adverse effect on the PSW system or any safety-related component in this system.

## UNIT 2 DESIGN CHANGE REQUESTS

This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-053, Rev. 0**

This change replaces the inlet gas flow controller for the post LOCA hydrogen recombiner with a new controller of a different type. The original controller is obsolete and an exact replacement is not available. The new controller is a digital programmable single-loop controller. This change does not modify the function of this system.

The combustible gas control system is safety related. This change has no adverse effect on the system and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**98-062, Rev. 0**

This change adds a safety-related resistor in series with the operating solenoid (SOL) of 2D11-AOV-F051 to reduce the voltage across the SOL. The addition of this resistor will increase the qualified life of the SOL to more than the duration between the refueling outages. The resistor will be seismically mounted in panel 2H11-P700. This change does not modify the function of the valve.

Fission product monitor sample valve 2D11-AOV-F051 is safety-related. The addition of the resistor will not adversely affect the function of the valve or any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**REQUESTS FOR ENGINEERING ASSISTANCE****HT-96676, Rev. 0**

This change allows the replacement of carbon steel small bore piping with stainless steel in the PSW and RHRSW systems to reduce the rate of microbiologically influenced corrosion. This change does not modify the function or operation of these systems.

The RHRSW and PSW systems are safety related. This change will have no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LICENSING DOCUMENTS CHANGE REQUESTS****LDCR 98-042**

This change modifies paragraph 6.3.2.13 of the Unit 2 FSAR to remove the statement that all CS system check valves are capable of manual operation for test purposes. This change does not modify the function or operation of this system.

The CS system is safety related. This change has no adverse effect on the CS system or any other safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 98-051**

Unit 2 FSAR subsection 5.5.7 is changed to reflect the proper MPL nos. for the inservice and spare RTDs utilized in the suppression pool temperature monitoring system. Also, associated figure 5.5-21 is changed to reflect dual RTD MPL nos. (or spare RTD designation) at applicable suppression pool temperature monitoring locations. In addition, a note is added to table 7.5-1 to indicate that redundancy to suppression pool temperature RTDs 2T48-TE-N301A – N303A, N304B, and N305A – N311A is provided by RTDs 2T48-TE-N009A – N009D. This change is necessary to correct inaccuracies/omissions in the Unit 2 FSAR.

The subject changes revise the Unit 2 FSAR to be consistent with the as-built condition of the plant. Since the FSAR changes do not alter any design bases, the margins of safety defined by the Technical Specifications are not reduced.

**LDCR 98-088 & LDCR 98-095**

These LDCRs apply to FSAR change FCF 15B-001, which modifies Unit 1 FSAR section 2.2 and Unit 2 FSAR section 2.1 by updating information regarding geography and demography that is out-of-date or inaccurate. This change is considered administrative in nature to assure the FSARs provide the most current information.

The changes to the FSARs do not reduce the margin of safety as defined in the bases for any Technical Specification because they are administrative in nature. They only provide a link to current geographic and demographic information. Accordingly, the changes do not affect any analytical methods or assumptions, any calculated results of accident analyses, or any NRC acceptance criteria associated with the licensing basis of the plant.

These LDCRs also apply to FSAR change FCF 15B-018, which modifies Unit 1 FSAR subsection 2.2.4 and Unit 2 FSAR paragraph 2.2.2.5 by specifying the nearest airport to HNP with commercial air service is located in Savannah, not Waycross, Georgia. This change is administrative in nature to assure the FSARs properly describe current air traffic activity in the vicinity of HNP and does not involve an unevaluated aircraft hazard.

**LICENSING DOCUMENTS CHANGE REQUESTS**

Since the Savannah Airport is located further from the HNP site than the Waycross Airport, there are no additional aircraft hazards to HNP. Accordingly, this change does not affect any analytical methods or assumptions, any calculated results of accident analyses, or any NRC acceptance criteria associated with the licensing basis of the plant.

**LDCR 98-211**

Unit 2 FSAR table 17.2-1 is changed to reflect the current title of procedures listed in this table. These changes are strictly editorial in nature. The process commitments remain as before the change.

The accident analysis was reviewed and determined to be unaffected by this change. Therefore, the proposed change does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the Unit 2 FSAR. This change does not reduce the margin of safety as defined in the bases for any Technical Specification.

**LDCR 98-217**

Unit 1 FSAR paragraph 10.4.3.1 and Unit 2 FSAR paragraph 9.1.3.2.2.1 are changed by the addition of a description of a new storage module identifier plate and a brief discussion of the thermal effects of this new plate on fuel stored in the spent fuel pool storage modules. The new identifier plate does not result in an unacceptable local cell water or fuel cladding temperature increase in that local water saturation conditions will not be reached nor will fuel cladding integrity be challenged.

Although the use of the new storage module identifier plate increases the storage cell wall and water temperature, and the fuel cladding temperature, these temperature increases do not adversely affect the structural integrity of the fuel or storage cell, the neutron absorption properties of the boron, thermal stresses in the cell walls, or material corrosion rates. These changes do not reduce the margin of safety as defined in the bases for any Technical Specification.

**LDCR 98-221**

This change modifies the FHA according to three specific items: 1) deletion of several isolated references to Thermo-Lag as a fire barrier material, 2) modification of section 9.9, Appendix I, to relocate the detailed fire hazard analysis of deviated penetration seals into a calculation, and 3) revision of the reference to the FHA drawings listed in FHA section 3.2. The document revision included in this scope does not modify the function or operation of the electrical cables or the passive fire protection features.

Thermo-Lag as a fire barrier material is not safety related nor are the penetration seals contained in FHA section 9.9 considered safety related. Neither the removal of Thermo-Lag nor the

**LICENSING DOCUMENTS CHANGE REQUESTS**

relocation of the analysis for the deviated pen seals has any adverse effect on the electrical cables or fire-rated barriers. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 98-229**

This change replaces the obsolete values shown in the settlement monitoring graphs and tables of Unit 2 FSAR supplement 2A with the latest updated values. This change does not modify the function or operation of any plant system.

The building settlement monitoring is not safety related. This change does not challenge or have any adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 98-239**

This change incorporates information provided in GE SIL 517 concerning the 50°F reactor coolant to loop differential temperature requirement for startup of an idle recirculation pump. The SIL states that, in addition to the thermal stress concerns on the reactor vessel and recirculation system piping and components, the 50°F requirement is also a part of the basis for fuel thermal limit calculations, such as those for the calculation of the MCPR and the MAPLHGR. LDCR 98-239 made changes to Unit 2 FSAR chapter 15, Accident Analysis, for startup of an idle recirculation pump and to the Technical Specifications Bases for SR3.4.9.4.

This change to the Bases and the FSAR solely reflects the additional justification for the 50°F differential temperature requirement prior to starting an idle recirculation pump. These changes are for clarification purposes only and, therefore, do not reduce the margin to safety defined in the basis for any Technical Specification.

**LDCR 99-003**

This LDCR is for the Unit 2 Cycle 15 COLR, Revision 2. This revision accommodates the main turbine bypass valves out of service. With these valves out of service, the OLMCPR must be used for core monitoring. To accommodate limited operation with the turbine bypass valves out of service, the COLR is being revised to include a new set of OLMCPR values calculated using NRC-approved methods. This change does not result in a change to the plant configuration or operation, and the margin of safety previously reported in the Technical Specifications is maintained for all licensed operating conditions.

**LICENSING DOCUMENTS CHANGE REQUESTS****LDCR 99-011**

This change clarifies the extent of HNP-2 conformance to NRC RG 1.36, "Nonmetallic Thermal Insulation for Austenitic Steel," as specified in Unit 2 FSAR Appendix A. This clarification notes that there may be applications that are not addressed by this regulatory guide and that for these applications, an engineering evaluation will be performed to limit the possibility of stress corrosion cracking. This change does not modify the function or operation of any systems.

No Technical Specifications limits are associated with this FSAR change. Additionally, any insulation placed on piping, which may be a Technical Specifications-required system or piece of equipment, will have an adequate engineering evaluation performed to ensure the probability of stress corrosion cracking is minimized. Therefore, no Technical Specification margins of safety are reduced.

**LDCR 99-012**

This LDCR is for a TRM change to add new instruments to the Master Equipment Cross Reference Lists and the table listing Qualified Post Accident Monitoring Instrumentation. See the safety evaluation summary for DCR 96-053.

**LDCR 99-014**

This change revises Unit 1 FSAR subsection 10.7.6 to delete the reference to restricting orifices near the PSW supply MOVs to each MCR air-conditioner. The stated function of the orifices was to limit flow to a value that does not cause "starvation" in the event of a failure of the piping downstream of the MCR air-conditioners. These orifices are not shown on the P&ID having been deleted from the P&ID several years ago as the result of a system walkdown that found the orifices were not installed. A calculation performed demonstrated the orifices were not necessary to prevent "starvation" of any safety-related equipment in the event of a piping failure downstream of the MCR air-conditioners. This change does not modify the function or operation of this system.

The PSW system is safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-015**

This request is to revise the current version of the FHA to reflect an extension of the surveillance frequency from weekly to monthly of the fire water main system as described in FHA Appendix B, sections 2.3.1.a and 2.3.1.b. The fire protection system is a non-safety related but is considered important to safety. Based upon the good maintenance history of the fire protection components, for which surveillance intervals are being extended, it has been determined that less frequent surveillance will not affect the capability of fire protection components to perform as

**LICENSING DOCUMENTS CHANGE REQUESTS**

designed. The inherent margin of safety that is relied upon results from the collective effect of defense-in-depth fire protection equipment and plant procedures to safeguard against the potential for fire. Changes to inspection frequencies are supported by maintenance data and will not change the present margin of safety.

**LDCR 99-016**

This LDCR is for a change to Unit 1 FSAR figure 9.4-1 per DCR 96-001. See the safety evaluation summary for DCR 96-001.

**LDCR 99-018**

Main steam piping A, B, C & D (class 1) was reanalyzed for EPU conditions. This resulted in changes in piping loads. FSAR table 3.9-2 needs to be updated to show maximum stress intensities. This change does not modify the function of the system due to stress reanalysis. The main steam piping system is safety related, but the safety margin of the system was not compromised as a result of this. Calculated code stresses and usage factors are within code allowable values.

This change will not have any impact on the Unit 2 Technical Specifications Bases, because the analysis is done within the allowable stress limit below the safety margin.

**LDCR 99-019**

This LDCR changes Unit 2 FSAR Appendix A, section A.38, to add a clarification to the plant's conformance to RG 1.38. This change will permit the plant to perform a specific evaluation for a particular motor before determining exactly what storage maintenance activities are required. The plant has programs to ensure that newly installed equipment is functioning properly. After installation, post maintenance checks are performed.

Because the plant has the above controls to ensure newly installed motors are operable before placing them into service, this change will not reduce the margin of safety as defined in any Technical Specification.

**LDCR 99-020**

This LDCR changes Section D, Emergency Classification System, of the HNP Emergency Plan to include EALs related to the operation of the ISFSI. Although the plant's implementation of ISFSI will affect other documents (e.g., the Security Plan), this LDCR is limited to the Emergency Plan. This change is based upon the Revision 8 submittal to the NRC of the Holtec HI-STAR 100 Cask System and its preliminary SER.

**LICENSING DOCUMENTS CHANGE REQUESTS**

Per the 10 CFR 50.54(q) evaluation, this change will not reduce the effectiveness of the Emergency Plan.

**LDCR 99-022**

This change modifies refueling floor heavy load paths drawing H-10167 to eliminate inconsistencies between calculations and this drawing. This change does not modify the function or operation of any system.

The refueling floor heavy load paths drawing is not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-023**

This LDCR breaks the second bullet for the Unit 1 TRM definition of an OPDRV into two bullets to make the Unit 1 TRM definition of OPDRVs agree with the Unit 1 Technical Specifications Sections 3.3.6.1 and 3.6.1.3.

By having the PCIVs operable per the Technical Specifications, adequate assurance the valves will perform all their intended safety-related design functions is maintained. Therefore, there is no reduction in the margin of safety defined in the basis for any Technical Specifications.

**LDCR 99-027**

This LDCR adds clarification to Unit 1 FSAR section A.3.1 and Unit 2 FSAR section 3.7A, based upon the revision of the safety evaluation performed to adopt the SQUG GIP, Revision 2 (GIP-2), as supplemented by NRC SSER No.2.

The change involves allowance of the GIP methodology as an alternate method for demonstration of seismic adequacy of equipment. Relative to the current Plant Hatch licensing basis, the GIP methodology provides an equivalent or superior level of assurance equipment will perform its required safety functions following a seismic event. As such, there is no decrease in the seismic adequacy of equipment. Therefore, the change does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR. The change does not affect the set of equipment that must meet seismic adequacy requirements or the level of seismic adequacy as defined in the FSAR; therefore, the change does not create the possibility of an accident or malfunction of equipment important to safety of a different type than previously evaluated in the FSAR.

Based on this evaluation, it is concluded that adopting the GIP as a licensing basis method results in: 1) no relaxation of the acceptance standards imposed by pertinent seismic regulations (GDC 2 and 10 CFR 100), and 2) no reduction in overall seismic safety margin.

**LICENSING DOCUMENTS CHANGE REQUESTS****LDCR 99-031**

This LDCR changes Unit 1 and Unit 2 TRM section T3.7.1, Snubbers, to delete the requirement in section D for 25% of snubbers to come from certain groups. This change will not impact the overall purpose for functionally testing snubbers as stated in GL 90-09. Operational experience gained from snubber functional testing determined that snubbers at the specified locations are no more likely to fail a functional test than are snubbers at other locations. The change will not have an impact on the functional test program with respect to its ability to provide a certain confidence level for the snubbers to operate within the specified acceptance limits.

The deletion of requiring specific groups of snubbers to be tested does not reduce the margin of safety as defined in the basis for any Technical Specifications.

**LDCR 99-036**

This change adds water inventory to the circulation water system to allow for increased cooling capacity. This change does not modify the function of this system.

The CW system is not safety related. This modification has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-054**

This LDCR changes the Unit 1 Technical Specifications Bases section B 3.1.7, "Standby Liquid Control (SLC) System," to revise the SLC system sodium pentaborate solution concentration to 660 ppm. This is the value assumed in the Unit 1 reload analyses when evaluating ATWS and shutdown without control rod events.

**LDCR 99-060**

This LDCR is for the Unit 1 Cycle 19 COLR, Rev. 0. The COLR contains the APLHGR limits and OLMCPRs for each fuel type in the core and the OPRM PBDA trip setpoint.

The power distribution limits and OPRM PBDA setpoint information do not modify plant configuration or operation, and will not reduce the Technical Specifications margin of safety.

**LDCR 99-063**

This change modifies the realistic radiological evaluations of the Unit 1 and Unit 2 FSAR safety analysis located in Unit 2 FSAR Chapter 15. The realistic radiological evaluations are updated using selected multiplying factors to reflect current plant configuration and power uprate to 2763 MWt. The NRC approved the encompassed configuration changes via license amendments

**LICENSING DOCUMENTS CHANGE REQUESTS**

based upon the more conservative NRC radiological evaluation methods. This change does not modify the function or operation of any encompassed systems.

The encompassed systems are safety related. This change does not have an adverse effect on the various systems. This change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-069**

This change revises Unit 1 FSAR paragraph 8.8.3.5.3.1.A.1 to replace the requirement of using rigid steel conduit for RPS and PCIS circuit with the requirement that only a rigid metal conduit be used. This will allow the use of rigid aluminum conduits and will agree with the wording used in the GE separation criteria from which Unit 1 criteria were developed. This change does not modify the operation of any system.

The criteria involved deal with safety-related circuits, raceways, and equipment. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-071**

This change: 1) revises Unit 2 FSAR paragraphs 3.33.2.2.B.1 and 3.11.3.1.B.1, and tables 3.11-1, 3.11-2, 3.11-3, and 3.11-4 and 2) eliminates the diagram shown in figure 3.11-1 to reflect the impact of EPU on the area environmental conditions used for EQ. This change does not modify the function of any environmentally qualified equipment.

The environmentally qualified equipment is safety related. This change has no adverse effect on any environmentally qualified equipment and does not reduce the margin of safety as defined in the basis of any Technical Specification.

**LDCR 99-073**

This change modifies Unit 1 FSAR section 7.16 by adding plant area environmental criteria currently being used to maintain the qualification of safety-related electrical equipment as outlined in HNP EQ specifications. This change clarifies the existing FSAR discussion of the Unit 1 EQ program and associated environmental conditions, and maintains consistency with the discussion of the EQ program in the Unit 2 FSAR.

The EQ program, EQ criteria, and the associated environmental conditions are not discussed or described in the Technical Specifications. Furthermore, this FSAR change does not affect any setpoints defined in the Technical Specifications, and no acceptance limits or failure points are affected. Therefore, the margin of safety as defined in the basis for any Technical Specification is not reduced.

**LICENSING DOCUMENTS CHANGE REQUESTS****LDCR 99-074**

This LDCR changes Unit 2 FSAR subsection 15A.5.3.1 in response to MDC 97-5035, for which the safety evaluation was reported in the 1998 AOR. A 10 CFR 50.59 evaluation was previously performed to address the design change per REA 95-666. The evaluation performed under REA 95-666 was for the replacement of the HPCI room submarine door with a hollow metal door. MDC 95-5035 superceded this evaluation to secure the HPCI room door in the open position instead of replacing it.

Since the evaluation performed for REA 95-666 assumed the hollow metal door fails following a steam line break inside the HPCI room and because the secured open submarine door provides a flow path equivalent to the failed hollow metal door, the conclusions of the previously reported evaluation are not changed.

**LDCR 99-086**

This change modifies the Unit 1 and Unit 2 FSARs to : 1) reflect the addition of the ISFSI to the plant site, 2) describe the use of the Holtec Dry Storage system for spent fuel, and 3) require PRB and SRB review of 10 CFR 72.48 evaluations. The FSAR changes describe handling and control of the storage system while in the reactor building, as well as the location of the dry storage facility on the owner-controlled property.

The existing applicable operability requirements contained in the Technical Specifications for SGTS operation and secondary containment configuration will be maintained throughout fuel movement and cask-loading activities. Spent-fuel cask loading activities do not change the operability requirements of any plant equipment required by the Technical Specifications and, therefore, do not reduce the margin of safety defined in the basis for any Technical Specification.

**LDCR 99-110**

This change revises Unit 1 FSAR table K.2-1 (Sheet 2 of 2) for materials used for non-pressure parts (specifically gaskets) by changing the text for the other materials from "Silicone Garlock gaskets" to "Silicone Garlock or equivalent gaskets." The gaskets affected by this material change are used in sealing the primary containment (drywell head, personnel airlock door, suppression chamber manway gaskets, etc.). These gaskets do not interact with any systems, structures, or components which maintain RCPB integrity.

By being equivalent to the original gasket material, the primary containment maximum leakage rate will be equivalent to that previously evaluated, and the margin of safety as defined in the basis for any Technical Specification is not reduced.

**LICENSING DOCUMENTS CHANGE REQUESTS****LDCR 99-117**

This change modifies the FSAR-specified total assumed leakage from the Unit 1 jet pumps to the RHR pumps in the LPCI mode of operation. A revised leakage rate of 225 gal/min is now specified in Unit 2 FSAR paragraph 4.2.2.3.2.3, since this Unit 2 FSAR chapter also applies to Unit 1. This change does not modify the function or operation of the Unit 1 jet pumps.

The actual capacity of the RHR pumps in the LPCI mode of operation is unaffected by this change. No change is proposed in the design or operation of the RHR pumps. Therefore, the integrity of the Technical Specifications LCO of the RHR pumps is unaffected by this change.

**LDCR 99-127**

This is a change to the description of several penetrations in Unit 1 and Unit 2 TRM table 8.2-1. This change does not result in a change to the plant as described in the FSAR and does not adversely impact the secondary containment function of the penetrations involved. Secondary containment will continue to function per its design, and tests will assure it satisfies the SR for secondary containment.

**LDCRs 99-159 & -160**

This change deletes the safety-related classification of the reactor building overhead cranes specified in Unit 2 FSAR table 17.2-2, "List of Safety-Related Structures, Systems, and Components," and Unit 1 FSAR table D.9-1, "Q Index Checklist." This change does not modify the function or operation of the reactor building overhead cranes.

Although the reactor building overhead cranes are not part of the Technical Specifications, they still meet the requirements of NUREG-0612. Impact on any plant equipment that is either part of the RCPB or responsible for safe shutdown or continued decay heat removal for which there is a Technical Specification is not considered credible given compliance with the requirements of NUREG-0612. Therefore, classifying the cranes as non—safety related will not reduce the margin of safety as defined in the bases for any Technical Specification.

**LDCR 99-161**

This change modifies the discussions of postulated pipe break locations in Class 1 piping systems specified in Unit 1 FSAR paragraph 5.2.4.6.1, and Unit 2 FSAR paragraphs 3.6.2.2 and 15A.4.2.1, by clarifying the applicability of the 0.1 CUF screening criterion. The commitment to the 0.1 CUF screening criterion for future design modifications to the Class 1 piping boundary is not eliminated by this change. This change only clarifies how long certain Class 1 piping locations might be operated with a CUF > 0.1.

The margin of safety associated with fatigue usage of Class 1 piping systems is established by the ASME Code by requiring a design value of CUF < 0.1. Since the 0.1 CUF screening criterion

**LICENSING DOCUMENTS CHANGE REQUESTS**

value is not changed, this FSAR change does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-171**

This change deletes FHA paragraphs 1.7.1 and 2.7.1 from Section 9.2, Appendix B, which will allow the removal of 13 yard hydrant houses from the protected area and the alternate use of mobile hose carrier equipment in lieu of stationary hydrant and hose house installations.

Replacing the hydrant hose houses with mobile equipment is considered an equivalent without impacting the plant. Without plant modification, this action does not reduce any margin of safety.

**LDCR 99-182**

This change modifies Unit 2 FSAR subsection 4.2.5 to reflect the impact of EPU on the CFUF formulas of the RPV components monitored in the thermal cycle tracking program. This change does not modify the function of the monitored RPV components.

The CFUF formulas are safety related. This change has no adverse effect on the associated RPV components and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**LDCR 99-183**

This change modifies Unit 2 FSAR paragraph 5.4.6.4 to reflect the impact of EPU on the CFUF formulas of the RPV components monitored in the thermal cycle tracking program. This change does not modify the function of the monitored RPV components.

The CFUF formulas are safety related. This change has no adverse effect on the associated RPV components and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**MINOR DESIGN CHANGES****MDC 95-5022, Rev.0**

This MDC replaces the jockey pump supply to RHR stop-check valves 1E11-F126A&B and the jockey pump to CS stop-check valves 1E21-F040A&B with globe-type isolation valves. The change also revises drawing H-16115 that affects Unit 1 FSAR figure. N.5-7. The replacement valves meet the design, material, and construction standards applicable to the RHR, CS, and jockey pump systems, and will not change, degrade, or prevent actions described or assumed in an accident. The ability of the system to perform its intended function is not adversely affected.

**MDC 96-5046 Rev. 0**

This MDC modifies lube oil systems for the condensate booster pumps 2N21-C002B&C by replacing most of the carbon-steel piping and threaded fittings with stainless-steel piping and welded fittings. These changes will increase the reliability of the condensate booster pump system by eliminating oil leakage and excessive cycling of the auxiliary pumps.

No operational requirements for any systems as defined in the Technical Specifications are impacted by this change. There are no changes to acceptance limits or failure points which could affect the margin of safety.

**MDC 97-5033, Rev. 0**

This MDC replaces valves 2G31-F039 and 2G31-F144 with new nozzle check valves which are a superior design that enables easier seat repair when required. The flow resistance and weight change for the valve replacement have been evaluated and found acceptable. The replacement of the existing tilting/swing check valves with more reliable nozzle check valves will have no effect on normal plant operations. No margin of safety as defined in the basis for any Technical Specification will be affected.

**MDC 98-5008, Rev. 0**

This MDC replaces selected MCCBs and changes the trip setpoints in selected MCCBs. The breakers meet design guidelines, and seismic and environmental requirements. The new breaker settings are based upon the same design guidelines as the existing breaker settings.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore, this MDC does not reduce the margin of safety as defined in the basis for any Technical Specifications.

## MINOR DESIGN CHANGES

**MDC 98-5027 Rev.0**

This MDC allows the use of a small number of GE14 LUAs in either Unit 1 or 2. GE provided a safety evaluation in accordance with 10 CFR 50.59 in which it was concluded that the GE14 LUAs maintain the margins of safety for fuel contained in the Technical Specifications.

**MDC 99-5001, Rev. 0**

This MDC installs carbon-steel blind flanges between the PSW discharge header and ARVs 2P41-F332A-D at the inlet to the ARV. Evaluation has concluded that the ARV function is not required to eliminate water hammer from the PSW system at pump start. The impact of additional weight of the blind flanges on the stress analysis and existing pipe supports has also been evaluated with no significant impact identified.

The modification will not affect the performance or operation of any of the systems served by PSW or any other safe shutdown components; therefore, the modification will not reduce the margin of safety as defined in the basis for any Technical Specifications.

**MDC 99-5004, Rev. 0**

This MDC modifies the 2E11-N007A/B RHRSW flow loops by replacing the existing Barton model 764 dP transmitters with Rosemount Model 1154 transmitters. This change will be transparent to operation of the RHRSW system.

No indications, setpoints, or alarms will be modified. These transmitters provide indication only and there is no impact on RHRSW controls. Thus, there is no impact on the margin of safety as defined in the basis for any Technical Specification.

**MDC 99-5008, Rev. 0**

This MDC replaces stop-check valves 2E11-F124A&B and 2E21-F040A&B with globe type isolation valves. This MDC also replaces check valves 2E11-F123A&B and 2E21-F039A&B with nozzle check valves. The new nozzle check valves will perform the checking function performed by the existing stop-check valves, and the globe valves will perform the throttling and isolation function of the stop-check valves. The systems function and operation will not be affected.

No system function is adversely affected. The LCOs and SRs are not affected by this modification.

**MINOR DESIGN CHANGES****MDC 99-5009, Rev. 0**

This MDC replaces the existing 900-hp motor on the 2P63-B016A turbine building chiller with a 1000-hp motor. The implementation of this MDC will not add any new modes of operation or increase the probability of existing failure modes of the chiller.

The turbine building chillers are non-safety related and are not associated with equipment important to safety previously evaluated in the FSAR. No margin of safety is associated with the turbine building chillers.

**TEMPORARY MODIFICATIONS****TM 1-99-002**

This TM disables the west trolley travel limit switch for Unit 1 turbine building overhead crane 1U31-E001 to allow the trolley to move to the west approximately 2 ft and the main hook to be centered over the hatch. This limit switch is conservatively set as there is approximately 6 ft between it and the mechanical stop (a steel block that the trolley cannot move). The limit is set so no part of the crane will strike any part of the building or other equipment in the area. This is also ensured by the mechanical stop. In the area of the west equipment hatch there are no interferences, equipment or otherwise, that could be impacted by the increased travel.

No Technical Specifications bases address the turbine building crane.

**TM 1-99-003**

This TM opens and tags breaker no.27 in 1R25-S003 to remove dc control power from Unit 1 Mark V control panel 1H21-P539. Due to the potential for grounds on the 125-V dc power source, a temporary disconnection of the dc power input is desirable. This evaluation is to determine the impact of this disconnection and relying on the two ac supplies to power the control panel. The original control system had only one power source, and no credit was ever taken for redundant power supplies in any accident analysis.

No acceptance limits are increased and no failure points or plant parameters are affected such that there is no reduction in the margin of safety.

**TM 1-99-004**

As a TM, the existing HFB 10-amp breaker in 1R24-S011 Frame 11A will be set to position no.7 (70 amps), which is approximately 1.5 times the measured peak inrush current. The trip setting of the breaker is based upon the same design guidelines as the existing trip setting.

No system function, method of operation, acceptance limit, or failure point is changed; therefore, this TM does not reduce the margin of safety.

**TM 1-99-006**

This TM provides temporary cooling to the computer room air-conditioners from the Unit 2 PSW, while the Unit 1 PSW lines to the chemistry lab air-conditioners and CO<sub>2</sub> storage tank room air-conditioners are being replaced. The load on the Unit 2 system is small enough to be considered negligible and will not impact the Unit 2 PSW system.

The proposed activity does not affect FSAR identified margins or any Technical Specifications margin of safety.

**TEMPORARY MODIFICATIONS****TM 1-99-007**

This TM modifies the tornado relief vent located on the roof of the Unit 1 stairwell at elevation 228 ft, refueling floor. The vent will be removed and temporarily replaced with a plywood panel secured to the vent frame. The panel will have a 6-in. hole with a bushing and coupling on it to accommodate the GERIS data acquisition cable. This is strictly an outage activity and the duration of this TM is controlled per plant procedure.

This activity does not affect, change, modify, interfere, or have any impact on major plant systems, structures, or components detrimental to the safe operation and shutdown of the plant. Secondary containment integrity will be assured by test per the Technical Specifications in the modified condition. Therefore, this activity does not reduce the margin of safety as defined in the basis for any Technical Specification.

**TM 1-99-011**

This TM will defeat limit switches 1F15E003 LS1 (no.1 refuel interlock LS) and 1F15E003 LS2 (no.2 refuel interlock LS) by raising their respective actuator arms to a position that will prevent contact to the "bridge near or over core" rail.

The use of a caution tag on the refueling bridge hoists will prevent loading any fuel into the core, while the one-rod-out interlock, combined with the proven margin of the core, will prevent an inadvertent criticality due to a control rod withdrawal. Therefore, the margin of safety is maintained by this TM.

**TM 1-99-013**

This TM opens links which prevent reactor building high radiation, refueling floor high radiation, high drywell pressure, and reactor vessel level 2 signals from the Unit 1 side and prevents start of Unit 1 SGT and secondary containment isolation.

During this TM, the plant will comply with the limiting conditions specified for Unit 1 in Mode 5 with the Unit 1 RPS bus depowered. Unit 2 will not be affected by this TM and will start both SGT and secondary containment isolation with a valid signal. Since these systems will either continue to operate as designed or be restricted by this TM, there can be no decrease in the margin of safety.

**TM 1-99-014**

This TM allows fan 1T41-C004A to remain running and dampers 1T41-F024A, 1T41-F024B, and 1T41-F026A to remain open while Unit 1 RPS buses 1A and 1B are de-energized in accordance with TM 1-99-013. Relay 1T41-K10 is to be de-energized by lifting both wires from terminal 9 of the relay in panel 1H11-P657. This configuration is permissible with Type C secondary containment in effect. This TM will be in effect only while the secondary containment

**TEMPORARY MODIFICATIONS**

isolation system and the SGTS for the Unit 1 reactor building are not required. The building ventilation for Unit 2 and the ability of SGT to respond to a postulated accident on Unit 2 will not be affected.

No margin of safety as defined by the Technical Specifications Bases will be affected by this TM.

**TM 1-99-018**

This TM changes the trip setting for the feeder breaker to RCIC steam supply isolation valve 1E51-F007 to position 9 (33 amps) to accommodate peak inrush starting current. The new breaker setting coordinates with upstream protective devices and allows the valve motor to start and operate properly.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore, this TM does not reduce the margin of safety defined in the basis for any Technical Specification.

**TM 1-99-020**

This TM replaces the existing HFB 25-amp breaker in MCC 1R24-S011 frame 2C with an HFB 30-amp magnetic-only breaker set to accommodate two times locked rotor amps. The new breaker will still trip in the event of a short circuit failure of the room cooler or interconnecting cables. The higher trip setting will coordinate properly with the upstream protective devices in the source feeder circuit to the MCC. The new breaker setting is based upon the same design guidelines as the existing setting.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore, this TM does not reduce the margin of safety as defined in the basis for any Technical Specification.

**TM 1-99-021**

This TM installs replacement EC-1 overcurrent trip devices with a 150-A rating, a 0.8X long-time pickup setting, and a 10X short-time pickup setting for the 125/250-V dc switchgear circuit breaker in 1R22-S016 frame 3B. The dc source of power and availability will continue to function as originally designed. The replacement EC-1 trip device provides the same degree of overcurrent protection and breaker coordination as the replaced trip device.

This TM does not create new modes of operation or reduce the margin of safety as defined in the basis of any Technical Specification.

**TEMPORARY MODIFICATIONS****TM 1-99-033**

This TM to lift wires on the "emergency in/notch override" switch allows the replacement of the switch on panel 1H11-P603. Automatic and manual scram functions will not be affected by this TM.

This switch is used in certain abnormal and emergency procedures when the ARI and SLC systems fail. This circumstance is beyond the plant's licensing basis; therefore, defeating the switch does not reduce the margin of safety as defined in the basis for any Technical Specification.

**TM 1-99-36**

This TM disables the "Rod Drift" alarm function for control rod 06-35 via installation of a jumper on the probe buffer card. The control rod was at position 48, at which the reed switch was not functioning properly. This resulted in an invalid "Rod Drift" alarm on panel 1H11-P603. With this alarm in, the function was effectively inoperable for all other control rods. This TM allows the "Rod Drift" alarm for all other control rods to be enabled.

No new modes of operation are introduced by this TM. CRD operation remains unchanged, and no margin of safety is reduced.

**TM 1-99-39**

This TM removes distribution valve 1W24F002 on the Unit 1A cooling tower and replaces it with a blank flange until a replacement valve can be procured. The valve body was leaking and could not be repaired by welding due to the size of the defect.

The ability to maintain the cooling towers and circulating water system as a heat sink is not affected by this TM such that the margin of safety as defined in the Unit 1 Technical Specifications is not compromised.

**TM 2-98-46**

This TM bypasses the thrust bearing wear detector and low bearing oil pressure trips on the main turbine. Bypassing the trips will allow work on the thrust bearing wear detector clutch. With these trips bypassed, the turbine will still trip on MSR high level, shaft pump discharge pressure low, and high vibration.

Bypassing the trips will not impact any of the basis for the turbine pressure regulator and overspeed protection described in the Technical Specifications.

**TEMPORARY MODIFICATIONS****TM 2-98-49**

This TM installs a mechanical jumper to maintain a water supply to the 2P65-B004A/B cooling towers. This TM will allow isolation of the sanitary water system to repair an identified leak. This activity will temporarily change the makeup water source for the 2P65-B004A/B cooling towers. The function of the cooling towers will not be changed, therefore, no new failure modes are introduced.

Maintaining the function of the cooling towers will further ensure all reactor building components/equipment do not overheat, thereby eliminating any indirect affect on Technical Specifications-related devices.

**TM 2-98-54 Rev.1**

This TM disables the DG 2A jacket coolant low temperature input from temperature switch 2R43-N034A at panel 2R43-S001A. Disabling the signal from the temperature switch removes the coolant low temperature alarm and does not modify the remaining functions of the annunciator.

Annunciators are not safety-related and perform no function other than alarm indication. No safety limits or failure points are adversely affected by this TM such that there is no reduction in any margin of safety.

**TM 2-99-003**

This TM disables the west trolley travel limit switch for Unit 2 turbine building overhead crane 2U31-E001 to allow the trolley to move to the west and allow the use of the 25-ton hook. This limit switch is conservatively set as there is approximately 6 ft between it and the mechanical stop (a steel block that the trolley cannot move). The limit is set so no part of the crane will strike any part of the building or other equipment in the area. This is also ensured by the mechanical stop. In the area of the west equipment hatch there are no interferences, equipment or otherwise, that could be impacted by the increased travel.

No Technical Specifications bases address the turbine building crane.

**TM 2-99-004**

This TM opens and tags breaker no.27 in 2R25-S003 to remove dc control power from Unit 2 Mark V control panel 2H21-P535. Due to grounds on the 125-V dc power source, a temporary disconnection of the dc power input is desirable. This evaluation is to determine the impact of this disconnection and relying on the two ac supplies to power the control panel. The original control system had only one power source, and no credit was ever taken for redundant power supplies in any accident analysis.

**TEMPORARY MODIFICATIONS**

No acceptance limits are increased, and no failure points or plant parameters are affected such that there is no reduction in the margin of safety.

**TM 2-99-005**

This TM will upgrade the existing breaker located at 2R24-S012 Fr. 5A from a HFB 3270 (30 amp) to a HFB 3480 (50 amp) breaker set at 2 times locked rotor amps to prevent spurious tripping of area cooler 2T41-B003B. The new breaker setting is based upon the same design guidelines as the existing setting. Changing the breaker to meet design guidelines does not affect the function or operation of the reactor building HVAC system, CS system or RHR system. The new breaker will still trip in the event of a short-circuit failure of the room cooler or interconnecting cables. However, this change will make the ECCS room cooler less likely to experience nuisance trips.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore, this TM does not reduce the margin of safety as defined in the basis for any Technical Specifications.

**TM 2-99-006**

This TM will disable the ROD SHIFT alarm function for Unit 2 control rod 46-31 on Main MCR Panel 2H11-P615. The rod is currently at position 00, and the reed switch is not functioning properly resulting in an invalid ROD DRIFT alarm on panel 2H11-P603. With this alarm "in," the function is effectively inoperable for all other control rods. This TM will allow the drift alarm to function for all other control rods for which the alarm is not disabled.

No new modes of operation are introduced by this TM. CRD operation remains unchanged, and no margin of safety is reduced. The rod drift alarm function is not required by any Technical Specification.

**TM 2-99-010**

This TM replaces the HFB 10-amp breaker located in MCC 2R24-S012 frame 2C with a new HFB 10-amp magnetic-only breaker with a trip setting set at 10 (90 amps) to accommodate 2 times peak inrush current for RCIC pump room cooler 2T41-B004B. The new breaker will still trip in the event of a short-circuit failure of the room cooler or interconnecting cables. The new breaker setting is based upon the same design guidelines as the existing setting.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore, this TM does not reduce the margin of safety as defined in the basis for any Technical Specification.

**TEMPORARY MODIFICATIONS**

**TM 2-99-014**

The existing motor for CS jockey pump 2E21-C003B is to be replaced. The replacement motor will require the trip setting of the breaker located in MCC 2R24-S012 frame 3B to be changed and the overload heater replaced. This TM changes the HFB 25-amp magnetic-only molded case breaker setting to HI-190 amps and replaces the FH41 overload heater with a FH39. The new breaker setting and overload heater size are based upon the same design guidelines as the existing breaker setting and overload heater size.

No system function, method of operation, acceptance limit, or failure point is changed. Therefore this TM does not reduce the margin of safety as defined in the basis for any Technical Specification.

**TM 2-99-025**

This TM disables the DG 2A jacket coolant low temperature input from temperature switch 2R43-N034A at panel 2R43-S001A. Disabling the signal from the temperature switch removes the coolant low temperature alarm and does not modify the remaining functions of the annunciator.

Annunciators are not safety-related and perform no function other than alarm indication. No safety limits or failure points are adversely affected by this TM such that there is no reduction in any margin of safety.

**SETPOINT DESIGN CHANGES****SDC 99-6013, Rev. 0**

This modification increases the setpoint for Unit 1 DG lube oil heater thermostats 1R43-N007A,B,&C to reduce pump trips associated with low oil temperatures. The lube oil system will continue to function within oil temperature requirements to provide lubrication for the DG. This modification better accounts for setpoint drift or inaccuracies in the temperature switch and does not change the overall function or control logic for the lube oil system.

**SDC 99-6014, Rev. 0**

This modification increases the setpoint for Unit 2 DG lube oil heater thermostats 2R43-N044A&C to reduce pump trips associated with low oil temperatures. The lube oil system will continue to function within oil temperature requirements to provide lubrication for the DG. This modification better accounts for setpoint drift or inaccuracies in the temperature switch and does not change the overall function or control logic for the lube oil system.

**PLANT PROCEDURES****10AC-MGR-004-0S, Rev. 12**

This revision changes the title of the procedure and the nomenclature within the procedure from "deficiency control" to "condition reporting." This activity involves a change in the nomenclature used to describe conditions adverse to quality only.

No engineering functions are involved or related to this nomenclature, and no margin of safety assumed in the Technical Specifications can be impacted.

**17SP-021599-OO-1-1S, Rev.0**

This special-purpose procedure addresses the operations required to achieve the plant configuration necessary to perform the NobleChem application. In order to inject NobleChem, the RHR system will be breached by opening 3/4-in. valves. Penetration flow paths are allowed by the Technical Specifications to be unisolated intermittently under administrative controls. The penetrations can be rapidly isolated when a need for primary containment isolation is indicated. No new equipment interaction, accident scenario, or sequence of events will be created by NobleChem that is not bounded by an evaluation in the FSAR.

**42SP-031699-OK-1-1S, Rev. 0**

This special purpose procedure provides a temporary means of supplying the MCR and computer room air-conditioning units with Unit 2 PSW, while the normal Unit 1 supply and discharge are unavailable due to the dual division system outage. MCRECS will continue to function as designed. Diverting flow to the MCR air-conditioning units will not affect the ability of the Unit 2 PSW to supply the necessary flow to Unit 2 essential systems.

The activity does not affect FSAR identified margins such as peak clad temperature, offsite doses, or any other Technical Specifications margin of safety.

**52SP-092899-JG-1-0S, Rev.0**

This special-purpose procedure provides instructions for replacing instrument bus switches while maintaining the instrument buses energized. This will result in temporary changes to the plant configuration as shown in the Unit 1 and Unit 2 FSARs. A temporary power supply cable will be installed from the essential cabinet to its corresponding instrument bus to ensure that instrument bus remains powered and two independently powered instrument buses remain operable as required by Technical Specifications.

This activity, therefore, preserves the margin of safety by ensuring both instrument buses are energized from independent power sources, conserving the electrical power distribution system single-failure-proof design.

**PLANT PROCEDURES****34SO-G31-003-2S, Rev.22 (SRO OPS 99-02)**

The procedure is revised to change the upper limit for the RWCU demineralizer flow rate to 125 gal/min. The revision is an effort to improve reactor water conductivity by increasing the flow through the RWCU demineralizers per the vendor's recommendation. A review of the accidents listed in Unit 2 FSAR chapter 15 shows that an increase in RWCU demineralizer flowrate has no relation to any of these accidents. The demineralizer vendor (Graver) has indicated that there are no adverse effects to the vessels by running at the increased rate. Also, since total RWCU system flow is not being changed in this revision, there will be no possibility of a transient caused by a moderator temperature change.

**34SO-G31-003-1S, Rev. 27**

This revision moves the upper limit for the RWCU demineralizer flow rate to 125 gal/min to improve reactor water conductivity by increasing the flow rate through the demineralizers.

The RWCU system is not safety related; however, it interfaces with safety-related systems. The higher demineralizer flow will not create any new failure modes for other safety-related equipment. The intent of this revision is to improve reactor water quality. This will effectively increase the margin of safety in regards to the conductivity requirements of TRM TLCO 3.4.1.

**42SP-040799-00-1-1N, Rev.0**

This special purpose test procedure, for TER 99-002, is to determine the direction of airflow within the Units 1 and 2 turbine building in the event of loss of exhaust airflow in the Unit 1 section of the turbine building with the Unit 2 ventilation system operating, while Unit 1 is in cold shutdown. With Unit 1 in cold shutdown, the heat load in the Unit 1 turbine building is minimized. Therefore, shutdown of the Unit 1 turbine building exhaust fan will not create any abnormal temperature transient which can affect unit operation, and will not increase the release of radioactive effluent to the environment. The Unit 1 turbine building ventilation system is not safety-related and is not credited in any accident analysis.

**42SV-SUV-029-1S, Rev. 4**

This revision is to revise the formulas for monitoring the CFUF for the recirculation and feedwater nozzles to account for changes in plant operation due to power uprate. An evaluation concluded that although the revised formula values would be higher than the CFUF values derived using the current formulas, the projected revised CFUF formula values for the RPV for both units would remain below the ASME Code design requirement of 1.00 for the anticipated 60-year plant operating life.

This revision will not affect any setpoints defined in the Technical Specifications, and no acceptance limits or failure points will be affected. Therefore, the margin of safety as defined in the basis for any Technical Specification will not be reduced.

**PLANT PROCEDURES****34SV-C11-002-2S, Rev. 4**

The revision allows the procedure to be performed with the unit in any mode and will eliminate the requirement to prevent control rods that are not fully inserted from moving in the event of a scram.

The revision will not alter the function of the RPS in response to a high water level in the SDV. The system will initiate a signal at its present setpoint, and the logic system will function to insert the control rods in the same manner as presently required by and analyzed in the Technical Specifications and FSAR. Consequently, the margin of safety cannot be reduced.

**42SV-SUV-029-2S, Rev. 3**

This revision revises the formulas for monitoring the CFUF for the recirculation and feedwater nozzles to account for changes in plant operation due to power uprate. An evaluation concluded that although the revised formula values would be higher than the CFUF values derived using the current formulas, the projected revised CFUF formula values for the RPV for both units would remain below the ASME Code design requirement of 1.00 for the anticipated 60-year plant operating life.

This revision will not affect any setpoints defined in the Technical Specifications, and no acceptance limits or failure points will be affected. Therefore, the margin of safety as defined in the basis for any Technical Specification will not be reduced.

**57CP-CAL-069-2S, Rev. 28**

This revision adds return-to-service instructions for 2C32-N004A, 2C32-N004B, and 2C32-N004C.

The requirement of the Technical Specifications is still met by this procedure and no reduction to the margin of safety is introduced.

**TEST OR EXPERIMENT REQUESTS****TER 99-001 Rev.0**

This TER is to determine the capability, or capacity, of one RFP. Special Purpose Procedure 03SP-030199-SA-1-1S, Rev. 0, provides instructions for performing the test. The information will be used to determine if a single RFP, in conjunction with a recirculation system runback, can maintain water level above the low level scram setpoint in the event of a trip of one of the two operating RFPTs.

No required instrumentation or equipment will be rendered inoperable by or for this test. RFP operation, except for the RFPT trip on high RPV water level, is not covered by the Technical Specifications. The high water level setpoint will not be changed or defeated by or for this test. This TER and Special Purpose Procedure do not reduce the margin of safety as defined in the basis for any Technical Specification.

**TER 99-002 Rev.0**

See the summary for Special Purpose Procedure 42SP-040799-00-1-1N, Rev. 0.

**UNIT 1 AND UNIT 2 CORE OPERATING LIMITS REPORTS**

**Hatch 1 Cycle 19 COLR, Rev. 0**

The Hatch-1 Cycle 19 COLR contains all of the power distribution operating limits required for Cycle 19 operation. This includes: OLMCPRs, APLHGR limits, and ARTS modifiers. The power distribution limits are based upon the NRC-approved increase in rated thermal power to 2763 MWth. The COLR also contains appropriate references.

The COLR is referenced in the Power Distribution Limits section of the Technical Specifications and is Appendix A of the TRM. The Cycle 19 COLR did not alter the physical configuration or operation of any system, structure or component. All values in the COLR were calculated using NRC-approved codes and methods. See the evaluation summary for LDCR 99-060.

FSAR table 3.6.1 was updated to incorporate reference to Revision 0 of the Hatch 1 Cycle 19 (Reload 18) Supplemental Reload Licensing Report J11-03434SRLR.

**Hatch 1 Cycle 19 Reload Safety Evaluation**

The reload safety evaluation describes the Cycle 19 final core configuration along with the Cycle 19 reference loading pattern which was used as the basis for reload licensing analyses and SLMCPR calculation. Appropriate references are included.

The Cycle 19 final core loading pattern meets all of the criteria described in GE's NRC-approved licensing topical report, GESTAR-II, for using a reference loading pattern and end-of-previous-cycle exposure conditions as a basis for reload licensing analyses.

**Hatch 2 Cycle 15 COLR, Rev. 2**

This revision provided OLMCPR values for operation with turbine bypass valves out of service for core thermal power above 28% of rated and exposures ranging from BOC to EOC-3100 MWd/ST.

The COLR is referenced in the Power Distribution Limits section of the Technical Specifications and is Appendix A of the Technical Requirements Manual. These Cycle 15 COLR changes did not alter the physical configuration or operation of any system, structure, or component. All values in the COLR were calculated using NRC-approved codes and methods. See the summary for LDCR 99-003.

**MISCELLANEOUS****1-99-74, Annunciator and Plant Component Sheet**

This activity applies to the deactivation of the Unit 1 APRM Downscale annunciator. This annunciator provides an indication of any APRM indicating < 5%. The unit was at or near MOP; therefore, the APRM would not be downscale as indicated by the alarm. The function of the APRM downscale annunciator is for MCR panel annunciation only. During the time the annunciator card is removed, the Technical Specification for trip inputs to RPS instrumentation is maintained, thereby ensuring the margin of safety is maintained.

**MER 92-018**

This change modifies the normally stored position of the stoplogs on the Unit 1 side of the intake structure to allow air flow through the air intake louvers. This change does not modify the function or operation of this system.

The stoplogs are not safety related. This change has no adverse effect on any safety-related system or component and does not reduce the margin of safety as defined in the basis for any Technical Specification.

**Operating Orders 00-01-1299S & 00-02-1299S**

These operating orders provide instructions for actions in response to RHRSW pump performance degradation. Stopping and restarting the RHRSW pumps for the purpose of backflushing do not reduce the margin of safety because the resulting peak suppression pool temperature for LOCA increases by only 1.3°F, an insignificant increase with respect to the design temperature limits of 281°F and 340°F for the Units 1 and 2 primary containments. For flow degradation during normal operation, backflushing of the pump column will return the pump to normal operation. If there is no reason to suspect that anything else is wrong with the pump, it is reasonable to assume it is operable. However, should the pump degrade below 4000 gal/min (ISI criteria), ISI surveillance should be performed to assure pump operability.

**DATA TABULATIONS AND UNIQUE REPORTING REQUIREMENTS**

**OCCUPATIONAL PERSONNEL RADIATION EXPOSURE FOR 1999**

This section satisfies the requirement of the Edwin I. Hatch Nuclear Plant Unit 1 and Unit 2 Technical Specification 5.6.1 and assures compliance with the Code of Federal Regulations as set forth in the pertinent sections of Title 10. Special attention was afforded to the methods prescribed by the NRC in Regulatory Guide (RG) 1.16 in order that the intent, as well as the letter of these laws, might be fulfilled with providing meaningful information as to the degree and circumstances of exposure of personnel at this facility. An indication of the effectiveness of the plant radiation program may be inferred from the large number of individuals with no measurable exposure or minimal dose.

The time period covered by this tabulation extended from January 1, 1999 through December 31, 1999. Individual exposures, as indicated by EDRDs, were recorded daily with the use of an ALARA Computer system. These exposures were tabulated and printed in hard copy on a daily basis and when required, along with the differences between these readings and the most restrictive exposure limit. The corresponding EDRD results, as recorded on the disc dosimetry files, were supplanted by thermo-luminescent measurements made over a period of approximately 1 calendar quarter as the data became available from a vendor. It should be noted that the radiation exposure values presented herein were based upon the EDRD data (estimated readings).

Each person listed in the dosimetry disc files was assigned an usual job category based upon daily activities. There are six job categories of this nature and they are identified in the table on the following two pages. Running totals of dose acquired in each of these categories were maintained for each person in his/her dosimetry file. Each dosimeter reading was added for individual exposure records and to the total representing the cumulative dose in the appropriate job category.

The implicit assumption involved in this method of accounting for exposure in different tasks is that all exposure acquired in job categories other than the usual will be documented by a Radiation Work Permit. This circumstance should prevail in all significant cases.

Further delineation regarding the number of persons and amount of exposure to individuals in different job categories and by various personnel categories is indicated by the standard reporting format of RG 1.16. Each personnel dosimetry disc file contains the personnel category information required to accomplish the record keeping. The individual running dose totals for each job were used by ALARA computer to compute the number of man-rem indicated in each group. Backup disc files were maintained for redundancy in the case of destruction of temporary inaccessibility suffered by the files. Hardcopy records, as printed by the ALARA computer, were also maintained.

By the use of the ALARA computer system, dosimetry information was compiled, retained and tabulated in such a manner as to satisfy the pertinent Federal regulations and plant Technical Specifications. The system is organized to provide the information in the format specified by these requirements and the suggestions of the RGs.

**REGULATORY GUIDE 1.16 INFORMATION  
END OF YEAR REPORT - 1999 (Sheet 1 of 2)**

| Work and Job Function                      | No. of personnel<br>> 100 mrem |         |            | Total man-rem * |         |            |
|--|--------------------------------|---------|------------|-----------------|---------|------------|
|  | Station                        | Utility | Contractor | Station         | Utility | Contractor |
| <b>ROUTINE PLANT MAINTENANCE</b>           |                                |         |            |                 |         |            |
| MAINTENANCE AND CONSTRUCTION               | 130                            | 2       | 322        | 48.219          | 1.096   | 124.049    |
| OPERATIONS                                 | 21                             | 0       | 0          | 6.002           | 0.007   | 0.002      |
| HEALTH PHYSICS                             | 38                             | 0       | 16         | 11.144          | 0.006   | 4.196      |
| SUPERVISORY                                | 9                              | 0       | 2          | 4.489           | 0.040   | 1.604      |
| ENGINEERING                                | 10                             | 1       | 8          | 2.763           | 0.688   | 3.031      |
| <b>ROUTINE OPERATIONS AND SURVEILLANCE</b> |                                |         |            |                 |         |            |
| MAINTENANCE AND CONSTRUCTION               | 0                              | 0       | 1          | 0.014           | 0.000   | 0.147      |
| OPERATIONS                                 | 66                             | 0       | 0          | 24.326          | 0.054   | 0.002      |
| HEALTH PHYSICS                             | 50                             | 0       | 41         | 17.205          | 0.019   | 15.367     |
| SUPERVISORY                                | 0                              | 0       | 0          | 0.405           | 0.040   | 0.007      |
| ENGINEERING                                | 0                              | 0       | 1          | 0.088           | 0.005   | 0.205      |
| <b>INSERVICE INSPECTION</b>                |                                |         |            |                 |         |            |
| MAINTENANCE AND CONSTRUCTION               | 0                              | 0       | 6          | 0.042           | 0.005   | 1.559      |
| OPERATIONS                                 | 0                              | 0       | 0          | 0.125           | 0.000   | 0.000      |
| HEALTH PHYSICS                             | 2                              | 0       | 0          | 0.730           | 0.000   | 0.339      |
| SUPERVISORY                                | 1                              | 0       | 0          | 0.173           | 0.000   | 0.000      |
| ENGINEERING                                | 0                              | 0       | 7          | 0.127           | 0.049   | 4.628      |
| <b>SPECIAL PLANT MAINTENANCE</b>           |                                |         |            |                 |         |            |
| MAINTENANCE AND CONSTRUCTION               | 54                             | 4       | 153        | 17.558          | 0.886   | 59.033     |
| OPERATIONS                                 | 0                              | 0       | 0          | 0.169           | 0.000   | 0.000      |
| HEALTH PHYSICS                             | 9                              | 0       | 5          | 4.367           | 0.000   | 1.406      |
| SUPERVISORY                                | 1                              | 0       | 2          | 1.415           | 0.000   | 0.827      |
| ENGINEERING                                | 1                              | 0       | 0          | 0.489           | 0.038   | 0.333      |

1999 ANNUAL OPERATING REPORT

EDWIN I. HATCH NUCLEAR PLANT

REGULATORY GUIDE 1.16 INFORMATION  
 END OF YEAR REPORT - 1999 (Sheet 2 of 2)

| Work and Job Function        | No. of personnel<br>> 100 mrem |          |            | Total man-rem * |              |              |
|------------------------------|--------------------------------|----------|------------|-----------------|--------------|--------------|
|                              | Station                        | Utility  | Contractor | Station         | Utility      | Contractor   |
| <b>WASTE PROCESSING</b>      |                                |          |            |                 |              |              |
| MAINTENANCE AND CONSTRUCTION | 1                              | 0        | 1          | 0.578           | 0.003        | 1.670        |
| OPERATIONS                   | 0                              | 0        | 0          | 0.008           | 0.000        | 0.000        |
| HEALTH PHYSICS               | 2                              | 0        | 5          | 0.809           | 0.000        | 0.850        |
| SUPERVISORY                  | 0                              | 0        | 0          | 0.011           | 0.000        | 0.000        |
| ENGINEERING                  | 0                              | 0        | 0          | 0.000           | 0.000        | 0.003        |
| <b>REFUELING OPERATION</b>   |                                |          |            |                 |              |              |
| MAINTENANCE AND CONSTRUCTION | 2                              | 0        | 33         | 0.530           | 0.020        | 9.864        |
| OPERATIONS                   | 0                              | 0        | 0          | 0.460           | 0.000        | 0.000        |
| HEALTH PHYSICS               | 0                              | 0        | 0          | 0.008           | 0.000        | 0.000        |
| SUPERVISORY                  | 0                              | 0        | 0          | 0.170           | 0.023        | 0.000        |
| ENGINEERING                  | 0                              | 0        | 3          | 0.006           | 0.006        | 1.212        |
| <b>TOTALS</b>                |                                |          |            |                 |              |              |
| MAINTENANCE AND CONSTRUCTION | 187                            | 6        | 516        | 66.941          | 2.020        | 196.322      |
| OPERATIONS                   | 87                             | 0        | 0          | 31.090          | 0.061        | 0.004        |
| HEALTH PHYSICS               | 101                            | 0        | 67         | 34.263          | 0.025        | 22.158       |
| SUPERVISORY                  | 11                             | 0        | 4          | 6.663           | 0.103        | 2.438        |
| ENGINEERING                  | <u>11</u>                      | <u>1</u> | <u>19</u>  | <u>3.473</u>    | <u>0.786</u> | <u>9.392</u> |
|                              | 397                            | 7        | 606        | 142.430         | 2.985        | 230.314      |

GRAND TOTAL = 375.729 MAN-REM

\*The total radiation exposure of the above personnel constitutes 100% of the site's exposure for the year.