



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

September 29, 2000

Southern Nuclear Operating Company, Inc.
ATTN: Mr. H. L. Sumner, Jr.
Vice President - Hatch Plant
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR POWER PLANT - NRC INSPECTION REPORT
NOS. 50-321/00-08, 50-366/00-08

Dear Mr. Sumner:

This refers to the inspection conducted on August 21-25, 2000, at your Hatch Nuclear Plant Units 1 and 2. The enclosed report presents the results of that inspection. This was a fire protection triennial baseline inspection which was performed using Procedure 71111.05 under the revised reactor oversight process. The results of that inspection were discussed with Mr. C. Moore and other members of your staff on August 25, 2000.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license as they related to implementation of your NRC-approved Fire Protection Program. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room or from the *Publicly Available Records (PARS) component* of the NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA BY J. LENAHAN/FOR

Kerry D. Landis, Chief
Engineering Branch
Division of Reactor Safety

Docket Nos.: 50-321,50-366
License Nos.: DPR-57, NPF-5

Enclosure: (See page 2)

SNC

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Enclosure: NRC Inspection Report Nos. 50-321/00-08 and 50-366/00-08 w/Attachment

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SNC

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-321, 50-366

License Nos: DPR-57, NPF-5

Report No: 50-321/00-08, 50-366/00-08

Licensee: Southern Nuclear Operating Company, Inc. (SNC)

Facility: E. I. Hatch Nuclear Power Plant, Units 1 & 2

Location: P. O. Box 2010
Baxley, Georgia 31515

Dates: August 21-25, 2000

Inspectors: R. Deem, Contractor, Brookhaven National Laboratories
N. Merriweather, Senior Reactor Inspector, Region II
R. Schin, Senior Reactor Inspector, Region II
M. Thomas, Senior Reactor Inspector, Region II
G. Wiseman, Senior Reactor Inspector (Lead Inspector), Region II

Approved By: Kerry D. Landis, Chief
Engineering Branch
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

Hatch Nuclear Plant, Units 1 and 2
NRC Inspection Report 50-321/00-08, 50-366/00-08

IR 05000321-00-08, IR 05000-00-08, on 8/21-25/00, Southern Nuclear Operating Company, Inc, Hatch Nuclear Plant. Triennial fire protection baseline inspection.

The inspection was conducted by a regional fire protection team and one contractor. No significant findings were identified.

REPORT DETAILS

REACTOR SAFETY

CORNERSTONES: INITIATING EVENTS and MITIGATING SYSTEMS

1R05 FIRE PROTECTION

.1 **Systems Required to Achieve and Maintain Post-Fire Safe Shutdown**

a. Inspection Scope

The team selected four risk significant fire areas identified in the licensee's individual plant examination for external events (IPEEE) to verify compliance with 10 CFR 50, Appendix R. The inspection included review of the post-fire safe shutdown (SSD) capability and the fire protection features to ensure that at least one post-fire SSD success path was maintained free of fire damage in the event of a fire as defined in Appendix R. For each of these fire areas, the team focused its inspection on the fire protection features, and on the systems and equipment necessary for the licensee to achieve and maintain SSD conditions. The fire areas chosen for review during this inspection were:

- (1) [Fire Area 0024]: Control building, main control room (MCR) complex, cable spreading room, and the computer room. A fire in this area would involve evacuation of the MCRs and shut down of both units using safe shutdown Path 3. Path 3 utilizes reactor core isolation cooling (RCIC), residual heat removal (RHR), and safety/relief valves (S/RVs) to provide reactor protection via inventory makeup, decay heat removal, and pressure control/depressurization. Path 3 systems use some Division 1 and some Division 2 equipment.
- (2) [Fire Area 1104]: Unit 1 East Cableway. A fire in this area would involve shutdown of Unit 1 using safe shutdown Path 1. Path 1 utilizes RCIC, S/RVs, and the RHR system in the alternate shutdown cooling mode to provide reactor protection via inventory makeup, pressure control/depressurization, and decay heat removal. Path 1 systems use primarily Unit 1 Division 1 equipment.
- (3) [Fire Area 1412]: Unit 1 4-kilovolt (KV) Switchgear Room 1E. A fire in this area would involve shutdown of Unit 1 using safe shutdown Path 2. Path 2 utilizes the high pressure coolant injection (HPCI), S/RVs, and the RHR system in the alternate shutdown cooling lineup to provide reactor protection via inventory makeup, pressure control/depressurization, and decay heat removal. The Path 2 systems use primarily Unit 1 Division 2 equipment.
- (4) [Fire Area 2409]: Unit 2 4-KV Switchgear Room 2G. A fire in this area would involve shutdown of Unit 2 using safe shutdown Path 2. The Path 2 systems use primarily Unit 2 Division 2 equipment.

The team reviewed the fire protection related licensing documents and plant design output documents to verify that the shutdown methodology had properly identified and

included the components and systems necessary to achieve and maintain safe shutdown. The documents reviewed included the Fire Hazards Analysis (FHA) and Fire Protection Program, Safe Shutdown Analysis (SSA), safe shutdown system piping and instrumentation drawings (P&IDs), schematics, elementary diagrams, cable routing information, plant fire area drawings, Technical Specifications (TS), and the Updated Final Safety Analysis Report (UFSAR). The team also reviewed the adequacy of the post-fire safe shutdown analytical approach to verify that it was consistent with and satisfied the appropriate 10 CFR 50, Appendix R reactor performance criteria for a boiling water reactor (BWR).

b. Findings

No significant findings were identified.

.2 Fire Protection of Safe Shutdown Capability

.21 Fire Detection Systems

a. Inspection Scope

The team walked down the accessible portions of the fire detection and alarm systems in the four selected plant areas to evaluate the engineering design and operation of the installed configurations. The team also reviewed engineering evaluations for the detection design, spacing criteria, and detector locations for the installed detection systems in the selected plant areas to verify effectiveness of the systems and compliance with the National Fire Protection Association (NFPA) code.

b. Findings

No significant findings were identified.

.22 Fire Protection Water Supply System

a. Inspection Scope

The team reviewed flow and wiring diagrams, and cable routing information associated with the fire pumps and fire protection/raw service water supply system. These systems were necessary for manual fire fighting activities and/or water-based fire suppression systems which protected redundant trains of systems for hot shutdown. The review was to determine whether the common fire protection water delivery and supply components could be damaged or inhibited by fire-induced failures of electrical power supplies or control circuits.

b. Findings

No significant findings were identified.

.23 Fixed Fire Suppression Systems

a. Inspection Scope

The team reviewed the adequacy of the design and installation of the carbon dioxide (CO₂) fire suppression systems for fire area 1412 and the sprinkler systems located in fire areas 0024A, (cable spreading room), and 1104, (Unit 1 East Cableway). Team members performed a walk down of the selected areas to assure proper placement and spacing of sprinkler heads and the lack of obstructions. The team reviewed CO₂ controls to assure accessibility and functionality of the system and associated ventilation system fire dampers. Vendor design calculations were verified to ensure that the required quantity of CO₂ for each area was available. Quality Assurance/Quality Control audits, fire protection program self-assessments, and the adequacy of licensee problem identification and resolution for identified findings were reviewed. Selected 10 CFR 50, Appendix R exemptions and engineering evaluations for NFPA code deviations were reviewed and compared against the physical configuration of the selected fire areas. Additionally, the team reviewed flow diagrams, and engineering evaluations associated with the floor drain and heating ventilation and air conditioning (HVAC) systems to verify that systems and operator actions required for post-fire safe shutdown would not be inhibited by combustible liquid spills, or leakage/flooding from fire suppression activities or rupture of fire suppression systems.

b. Findings

No significant findings were identified.

.24 Fire Barrier Enclosures

a. Inspection Scope

The team reviewed the four selected fire areas to evaluate the adequacy of the fire resistance of fire area barrier enclosure walls, ceilings, floors, structural beam support protection, fire barrier penetration seals, fire doors, and fire dampers by observing the material condition and configuration of the installed fire barrier features, as well as, construction details and supporting fire endurance tests for the installed fire barrier features. The team also reviewed the FHA to verify the fire loading used by the licensee to determine the fire resistive rating of the fire barrier enclosures. In addition, the team reviewed the licensing documentation, 10 CFR 50, Appendix R exemptions, generic letter (GL) 86-10 engineering evaluations of fire barrier features, engineering calculations, and NFPA code deviations to verify that the fire barrier installations met licensing commitments.

b. Issues and Findings

No significant findings were identified.

.25 Fire Brigade Equipment

a. Inspection Scope

The team performed a walk down of the fire brigade house and response vehicle to assess the condition of fire fighting equipment. Fire brigade personnel protective equipment was examined to evaluate equipment accessibility and functionality. The adequacy of the fire brigade self-contained breathing apparatus (SCBA) was examined as well as the availability of supplemental breathing air tanks.

b. Findings

No significant findings were identified.

.26 Fire Brigade Drill Program

a. Inspection Scope

The team reviewed the fire brigade drill program and observed the fire brigade response associated with an announced fire brigade drill in the Unit 1 4-KV Switchgear Room 1E (fire area 1412). The team observed the drill to verify that: 1) the fire brigade properly donned their protective clothing and turnout gear, which included wearing the SCBA face masks; 2) fire hoses were capable of reaching the targeted location and were properly laid out; 3) the fire brigade made a controlled fire area entry; 4) the fire brigade leader provided clear directions; 5) radio communications were effective; 6) the fire brigade performed a search for smoke and/or fire propagation, as well as search activities for fire victims; 7) the fire brigade conducted smoke removal activities simulated by the control room operators; and 8) the brigade's response and drill performance met the established drill objectives. The team also reviewed previous critiques of other operating shifts' drill performances and fire brigade training/drill records to determine if fire brigade personnel qualifications and drill participation met the requirements of the licensee's approved fire protection program.

b. Findings

No significant findings were identified.

.27 Compensatory Measures

a. Inspection Scope

The team reviewed the administrative controls for out-of-service, degraded, and/or inoperable, fire protection systems and post-fire SSD systems and components. The

review was performed to verify that the risk associated with removing fire protection and/or post-fire systems or components was properly assessed and adequate compensatory measures were implemented in accordance with the licensee's technical specifications (TS) and approved fire protection program.

b. Findings

No significant findings were identified.

.3 Post-Fire Safe Shutdown Circuit Analysis

a. Inspection Scope

The team reviewed approximately 65 circuits associated with safe shutdown components which were subject to fire damage in the selected fire areas, to independently verify the licensee's safe shutdown circuit analysis results and conclusions. The team reviewed electrical schematics, wiring diagrams, and cable routing information to verify that fire damage to those electrical circuits located in the fire areas and associated with systems and components required for post-fire safe shutdown would not prevent safe shutdown as a result of open circuits, hot shorts, or shorts to ground or that required operator actions had been identified. The team also reviewed operator actions to verify the appropriateness of the actions. The team noted that breaker and fuse coordination had been performed.

b. Findings

No significant findings were identified.

.4 Alternative Shutdown Capability

a. Inspection Scope

The team performed a review of the licensee's abnormal procedures for fire response, alternative safe shutdown procedures, and the licensee's Appendix R manual action requirements analyses for a fire in fire area 0024. The team also walked down selected portions of the procedures. The reviews focused on ensuring that all required functions for post-fire safe shutdown and the corresponding equipment necessary to perform those functions were included in the procedures. The walk downs focused on ensuring that the procedures could reasonably be performed within the required times, given the minimum required staffing level of operators, with or without offsite power available. The team reviewed the licensee's smoke control procedures, ventilation systems, and SCBA availability to verify that smoke would not prevent operators from performing the procedures. The team also reviewed the electrical isolation of selected motor operated valves from the control room to verify that operation of the Unit 1 RCIC or RHR systems from the remote shutdown locations would not be prevented by a fire-induced circuit fault. In addition, the team reviewed the licensee's method for assuring that the RHR pump suction piping was full of water prior to starting an RHR pump. The objective of these reviews was to assure that the post-fire safe shutdown analytical approach, safe

shutdown equipment, and procedures were consistent and complied with the Appendix R reactor performance criteria for safe shutdown.

b. Findings

No significant findings were identified.

.5 Operational Implementation of Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the operational implementation of the alternative shutdown capability for a fire in the cable spreading room (Fire Area 0024) to verify that: (1) the training program for licensed personnel included alternative or dedicated safe shutdown capability; (2) personnel required to achieve and maintain the plant in hot shutdown following a fire using the alternative shutdown system could be provided from normal onsite staff, exclusive of the fire brigade; (3) the licensee had incorporated the operability of alternative shutdown transfer and control functions into plant Technical Specifications; and (4) the licensee periodically performed operability testing of the alternative shutdown instrumentation and transfer and control functions, including imposing appropriate compensatory measures during testing when the alternative shutdown capability may be declared inoperable. The review focused on ensuring that all required functions for post-fire safe shutdown, and the corresponding equipment necessary to perform those functions, were included in the procedures. The objective of this review was to assure that the safe shutdown equipment, shutdown procedures, and the post-fire safe shutdown analytical approach were consistent and satisfied the Appendix R reactor performance criteria for safe shutdown.

b. Findings

No significant findings were identified.

.6 Communications for Performance of Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the adequacy of portable radio communications equipment to support performance of safe-shutdown activities and fire brigade duties. The team verified that portable radios were dedicated for emergency use by operators and those radios were inspected and maintained in a charged state. Additionally, the team interviewed operations personnel to determine if there were any areas where the radios could not be used. During procedure walk downs, the team inspected remote shutdown equipment to verify that adequate communications equipment was available for the personnel performing alternative safe shutdown.

b. Findings

No significant findings were identified.

.7 Emergency Lighting for Performance of Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the emergency lighting for safe-shutdown activities in the selected fire areas to verify that it was adequate for permitting access to safe shutdown equipment and performing manual actions required to achieve and maintain hot shutdown conditions. During procedure walk downs, the team examined the material condition of lighting units to verify that emergency lighting unit lamps were operational and the lighting heads were aimed to provide adequate illumination for personnel to perform the procedure steps.

b. Findings

No significant findings were identified.

.8 Cold Shutdown Repairs

No cold shutdown repairs were required for implementation of the three safe shutdown paths utilized by the licensee.

4. OTHER ACTIVITIES

4OA5 Management Meetings

The lead inspector presented the inspection results to Mr. C. Moore, Assistant General Manager - Plant Support, and other members of the licensee's staff at the conclusion of the inspection on August 25, 2000. The licensee acknowledged the inspection findings presented and did not have any dissenting comments. Proprietary information was reviewed by the team but is not included in this inspection report.

PARTIAL LIST OF PERSONS CONTACTED**Licensee**

J. Betsill, Assistant General Manager - Plant Operations
J. Branum, Licensing Project Engineer, Southern Nuclear Operating Company, Inc. (SNC)
M. Dean, Fire Protection Engineer, Engineering Support
G. Griffis, Operations Supervisor
J. Hammonds, Engineering Support Manager
E. Ingram, Senior Engineer, Technical Services, SNC
R. King, Supervisor, Engineering Support
D. Madison, Operations Manager
B. Matthews, Senior Engineer, Fire Protection, SNC
T. Metzler, Supervisor, Nuclear Safety and Compliance
C. Moore, Assistant General Manager - Plant Support
D. Parker, Engineer - Hatch Project, Southern Company Services
J. Shuman, Supervisor, Engineering Support
S. Tipps, Manager, Nuclear Safety and Compliance
J. Vance, Engineer - Hatch Project, Southern Company Services
P. Wells, General Manager - Nuclear Plant

Other licensee employees contacted included engineers, operations personnel, fire services personnel, and administrative personnel.

NRC

T. Fredette, Resident Inspector
B. Mallett, Deputy Regional Administrator, Region II
J. Starefos, Acting Senior Resident Inspector

ITEMS OPENED, CLOSED, OR DISCUSSED

None

APPENDIX

LIST OF DOCUMENTS REVIEWED

PROCEDURES

Administrative Procedure 40AC-ENG-008-0S, Fire Protection Program, Revision 8, ED 2

Fire Protection Surveillance Procedure 42SV-FPX-037-0S, Fire Detection Instrumentation Surveillance, Revision 4, ED 2

Surveillance Procedure 42SV-FPX-003-0S, Emergency Lighting Surveillance, Revision 9, ED 1

Abnormal Operating Procedure 34AB-C71-001-1S, Scram Procedure, Revision 9

Abnormal Operating Procedure 34AB-C71-001-2S, Scram Procedure, Revision 9

Administrative Control Procedure 30AC-OPS-003-0S, Plant Operations, Revision 21 ED 1

Fire Protection Procedure 34AB-X43-001-1S, Fire Procedure, Revision 8 ED 1

Fire Protection Procedure 34AB-X43-001-2S, Fire Procedure, Revision 10 ED 3

Inspection and Test Procedure 34IT-EOP-001-0S, EOP Equipment Checks, Revision 12 ED 1

Remote Shutdown Procedure 31RS-001-OPS-1S, Shutdown From Outside Control Room, Revision 5 ED 1

Remote Shutdown Procedure 31RS-OPS-001-2S, Shutdown From Outside Control Room, Revision 6

Remote Shutdown Procedure 31RS-OPS-002-1S, Electrical Restoration, Revision 4

Remote Shutdown Procedure 31RS-OPS-002-2S, Electrical Restoration, Revision 4 ED 1

Remote Shutdown Procedure 31RS-E41-001-1S, HPCI Operation From Outside Control Room, Revision 0

Remote Shutdown Procedure 31RS-E41-001-2S, HPCI Operation From Outside Control Room, Revision 2

Remote Shutdown Procedure 31RS-E51-001-1S, RCIC Boron Injection From Outside Control Room, Revision 0 ED 1

Remote Shutdown Procedure 31RS-E51-001-2S, RCIC Boron Injection From Outside Control Room, Revision 0 ED 1

Procedure 34SO-Z41-001-1S, Control Room Ventilation System, Revision 16, ED 3

Procedure 34AB-T23-002-1S, Small Pipe Break Inside Primary Containment, Revision 4, ED 3

Department Instruction DI-FPX-02-0693N, Fire Fighting Equipment Inspection, Revision 4

Fire Protection Calibration Procedure 57CP-FPX-001-0S, Alision Controls Fire Alarm Calibration Tests, Revision 1

Department Instruction DI-FPX-04-0694N, Fire Incident Reports, Reports for 1999 and 2000

Nuclear Engineering Procedure NEP 4-0, Processing Design Change Requests, Revision 5

PROMATEC Technologies, Inc., Installation Procedure IP-2032, Installation of PROMAT-H One Hour Fire Protective Barriers, Revision C

CALCULATIONS

SMNH-93-058, Hatch Nuclear Plant Fire Detection Design Criteria, Revision 5

SMNH-98-023, Hatch Nuclear Plant Fire Protection Penetration Seal Deviation Analysis, Revision 0

DRAWINGS

A-43965, Unit 1 East Cableway Pre-Fire Plan Sheet 34A, Revision 2

A-43965, Unit 1&2 Cable Spreading Room Pre-Fire Plan Sheet 44A, Revision 1

A-43965, Unit 1&2 Computer Room Pre-Fire Plan Sheet 45B, Revision 2

A-43966, Diesel Generator Building Switchgear Room 1E Pre-Fire Plan Sheet 17A, Revision 1

A-43966, Diesel Generator Building Switchgear Room 2G Pre-Fire Plan Sheet 26A, Revision 1

B-19632, Sheets 1, 47 and 48, Penetration Seals - Type, Number, and As-built Locations, Revision 1

B-23801, Sheet 2, Block Diagram - System 2R43A Diesel Generator 2A, Revision 5

B-23811, Sheet 1, Block Diagram - System 2R43C Diesel Generator 2C, Revision 6

D-11001, Unit 1 P&ID for Service Water Piping at Intake Structure Sheet 1, Revision 62

D-11004, Unit 1 P&ID for RHR Service Water Outside Building, Revision 33

H-11024, Unit 1 P&ID for Service Water Piping Sheet 1, Revision 50

H-11029, Unit 1 P&ID for Main Turbine and Reactor Feed Pump Turbine Lube Oil System, Revision 17

H-11033, Unit 1 P&ID for Fire Protection System, Sheet 1, Revision 43

H-11037, P&ID for Fuel Oil Diesel Oil System. Revision 26

H-11040, Unit 1 P&ID for Control Building Ventilation System, Revision 22

H-11046-11063, Unit 1 Turbine Building Floor and Equipment Drains Piping, Revision 2

H-11082, Unit 1 Turbine Building Generator Purge System Piping, Revision 7

H-11219-11220, Diesel Generator Building Floor Drainage Piping, Revision 6

H-11304, P&ID for East Cableway Sprinkler System, Revision 17

H-11323, Units 1 and 2 P&ID for Fire Protection Piping, Cable Spreading Room, Revision 12

H-11502, Unit 1 P&ID, Hydrogen Water Chemistry System, Revision 1

H-11600, Unit 1 P&ID for Service Water at Diesel Generator, Revision 25

H-11609, Unit 1 P&ID for Service Water Piping Sheet 2, Revision 40

H-11631 Sheet 1, Unit 1 P&ID for Diesel Generator 1A & 1C Sheet 1, Revision 21

H-11631 Sheet 2, Unit 1 P&ID, Diesel Generator 1A & 1C Sheet 2, Revision 5

H-11640, Unit 1 HPCI Oil Piping P&ID, Revision 5

H-11884, Unit 1 Control Building Equipment Layout Drawings, Sheet 1, Revision 0

H-11894, Diesel Generator Building Equipment Layout Drawings, Sheet 1, Revision 2

H-13513, Wiring Diagram 4160V SWGR Bus 1E, Frame 6

H-13350, Unit 1 Master Single Line Diagram, Revision 17

H-13614, Wiring Diagram Fire Protection Pump House Equipment

H-13622, Wiring Diagram Sanitary Water System

H-13834, Sheet 34, Elementary Diagram ATTS. System A70, Revision 5

H-16011, Unit 1 Reactor Building Service Water System P&ID, Revision 41

H-16024, Unit 1 Primary Containment Inerting System P&ID, Revision 42

H-16062, Unit 1 Nuclear Boiler system P&ID Sheet 1, Revision 39

H-16063, Unit 1 Nuclear Boiler system P&ID Sheet 2, Revision 33

H-16194, Unit 1 Control Building HVAC. System for Control Building, Revision 20

H-16286, Unit 1 Drywell Pneumatic System P&ID Sheet 1, Revision 29

H-16299, Unit 1 Drywell Pneumatic System P&ID Sheet 2, Revision 4

H-16329, Unit 1 RHR System P&ID Sheet 1, Revision 58

H-16330, Unit 1 RHR System P&ID Sheet 2, Revision 46

H-16331, Unit 1 Core Spray System P&ID, Revision 24

H-16332, Unit 1 HPCI System P&ID Sheet 1, Revision 49

H-16333, Unit 1 HPCI System P&ID Sheet 2, Revision 34

H-16334, Unit 1 RCIC System P&ID Sheet 1, Revision 37

H-16335, Unit 1 RCIC System P&ID Sheet 2, Revision 24

H-17182, Sheet 1, Unit 1 PCIS System C61 And NSSS System A71 Isolation Valves External Connection Diagram, Revision 22

H-17184, Unit 1 Nuclear Steam Supply Shutoff System A71 Panel H11-P623 External Connection Diagram, Revision 28

H-17594, Sheet 2, Unit 1 Analyzer, Ventilation & Leak Detection Panel H11-P700 Wiring And External Connection Diagram, Revision 24

H-17598, Sheet 6, Unit 1 Analyzer, Ventilation And Leak Detection Panel H11-P700 Wiring And External Connection Diagram, Revision 23

H-17753, Sheet 1, Automatic Depressurization System B21C Elementary Diagram, Revision 29

H-17754, Sheet 2, Automatic Depressurization System B21C Elementary Diagram , Revision 31

H-17755, Sheet 3, Automatic Depressurization System B21C Elementary Diagram, Revision 25

H-17759, Sheet 5, Automatic Depressurization System B21C Elementary Diagram, Revision 3

H-17809, Sheet 4, Unit 1 Nuclear Steam Supply Shutoff System A71 Elementary Diagram, Revision 25

H-17814, Sheet 9, Unit 1 Nuclear Steam Supply Shutoff System A71 Elementary Diagram, Revision 20

H-17816, Sheet 11, Unit 1 Nuclear Steam Supply Shutoff System Elementary Diagram, Revision 13

H-17920, Automatic Depressurization System B21 Panel H11-P628 and Miscellaneous External Connection Diagram, Revision 13

H-17928, Unit 1 Reactor Protection System C71 Panel H11-P609 & Misc. External Connection Diagram, Revision 25

H-17942, Sheet 3, Unit 1 Reactor & Containment Cooling & Isolation Benchboard H11-P601 External Connection Diagram, Revision 45

H-17944, Sheet 1, Reactor Water Clean-Up & Recirculation Benchboard H11-P602 External Connection Diagram, Revision 40

H-17992, Unit 1 Drywell Pneumatic System P70 External Connection Diagram, Revision 11

H-19574, Unit 1 Shutdown Instrument Panel H21-P173 Wiring and External Connection Diagram, Revision 6

H-19606, Sheet 4, Main Steam Relief Valves Leak Detection System B21C Elementary, Revision 10

H-19617, Wiring Diagram Remote Shutdown Panel Division II C82-P002

H-19807, Sheet 7, Elementary Diagram ATTS. System A70, Revision 5

H-19825, Sheet 25, Elementary Diagram ATTS. System A70, Revision 4

H-19831, Sheet 31, Elementary Diagram ATTS System A70, Revision 3

H-19832, Sheet 32, Elementary Diagram ATTS System A70, Revision 6

H-19855, ATTS Cabinet H11-P925 External Connection Diagram, Revision 12

H-19856, ATTS Cabinet H11-P926 External Connection Diagram, Revision 12

H-19857, Unit 1 External Connection Diagram ATTS Cabinet H11-P927, Revision 10

H-19858, Unit 1 External Connection Diagram ATTS Cabinet H11-P928, Revision 13

H-21033. Unit 2 Turbine Building Service Water System P&ID Sheet 1, Revision 44

H-21034, Unit 2 Turbine Building Service Water System P&ID Sheet 2, Revision 25

H-21035, Unit 2 Turbine Building Service Water System P&ID Sheet 3, Revision 31

H-21039, Unit 2 R.H.R. Service Water System P&ID, Revision 33

H-21074, Unit 2 Diesel Engine & Fuel Oil system P&ID, Revision 39

H-23350, Unit 2 Master Single Line Diagram, Revision 8

H-23390, Sheet 2, Unit 2 Single Line Diagram 125/250V DC Station Service Division II 2R42A - MPL 2R25-S002, Revision 13

H-23390, Sheet 1, Unit 2 Single Line Diagram 125/250V DC Station Service - Division I 2R42A MPL's 2R25-S001 and 2R25-S003, Revision 45

H-23390, Sheet 1, Unit 2 Single Line Diagram 125/250V DC Station Service - Division I 2R24A MPL's 2R25-S001 and 2R25-S003, Revision 45

H-23390, Sheet 2, Unit 2 Single Diagram 125/250V DC Station Service Division II 2R42A - MPL 2R25-S002, Revision 13

H-23801, Sheet 1, Elementary Diagram -2R43A Diesel Generator, Revision 14

H-23811, Sheet 1, Elementary Diagram - 2R43C Diesel Generator 2C, Revision 12

H-24101, Unit 2 HPCI System 2E41 Internal And External Wiring Diagram Panel 2H21-P050, Revision 7

H-24635, Unit 2 Diesel Generator Building Safe Shutdown Raceway Plan, Revision 6

H-24777, Emergency Lighting for Diesel Generator Building, Revision 0

H-26000, Unit 2 Nuclear Boiler System P&ID Sheet 1, Revision 37

H-26001, Unit 2 Nuclear Boiler System P&ID Sheet 2, Revision 35

H-26014, Unit 2 R.H.R. System P&ID Sheet 1, Revision 45

H-26015, Unit 2 R.H.R. System P&ID Sheet 2, Revision 43

H-26018, Unit 2 Core Spray System P&ID, Revision 29

H-26020, Unit 2 HPCI System P&ID Sheet 1, Revision 37

H-26021, Unit 2 HPCI System P&ID Sheet 2, Revision 25

H-26023, Unit 2 RCIC System P&ID Sheet 1, Revision 27

H026024, Unit 2 RCIC System P&ID Sheet 2, Revision 24

H-26050, Unit 2 Reactor Building - Plant Service Water System P&ID Sheet 1, Revision 34

H-26051, Unit 2 Reactor Building - Plant Service Water System P&ID Sheet 2, Revision 36

H-26066, Unit 2 Drywell Pneumatic System P&ID Sheet 1, Revision 26

H-26074, Unit 2 Primary Containment Cooling System P&ID, Revision 19

H-26083, Unit 2 Nitrogen Inerting System P&ID, Revision 36

H-26084, Unit 2 Primary Containment Purge & Inerting System P&ID, Revision 29

H-27014, Sheet 2, Unit 2 Single Line Diagram - Reactor Building 600/208V AC Essential MCC 2B MPL's 2R24-S012 And 2R25-S102, Revision 30

H-27233, Sheet 3, Unit 2 Drywell Pneumatic System 2P70 Elementary Diagram, Revision 5

H-27664, Sheet 1, Unit 2 HPCI System 2E41 Elementary Diagram, Revision 39

H-27665, Sheet 2, Unit 2 HPCI System 2E41 Elementary Diagram, Revision 35

H-27667, Sheet 4, Unit 2 HPCI Sys 2E41 Elementary Diagram, Revision 29

H-27668, Sheet 5, Unit 2 HPCI Sys 2E41 Elementary Diagram, Revision 24

H-27671, Sheet 8, Unit 2 HPCI Sys 2E41 Elementary Diagram, Revision 26

H-27673, Sheet 1, Unit 2 RCIC System 2E51 Elementary Diagram, Revision 36

H-27674, Sheet 2, Unit 2 RCIC System 2E51 Elementary Diagram, Revision 16

H-27675, Sheet 3, Unit 2 RCIC System 2E51 Elementary Diagram, Revision 25

H-27678, Sheet 6, Unit 2 RCIC System 2E51 Elementary Diagram, Revision 41

H-27914, Unit 2 Drywell Pneumatic System 2P70 External Connection Diagram, Revision 5

H-27963, Sheet 1, Unit 2 Analyzer, Vent And Leak Det. Panel 2H11-P700 External Connection Diagram, Revision 23

H-27966, Sheet 2, Unit 2 Analyzer, Vent. & Leak Det. Panel 2H11-P700 External Conn. Diagram, Revision 26

H-28023, Unit 2 Drywell Pneumatic System P&ID Sheet 2, Revision 7

H-40190, Unit 1 Turbine Building Appendix R Raceways, Revision 3

H-40217, Sheet 3, Unit 1 Drywell Pneumatic System P70 Elementary Diagram, Revision 3

H-41505, Emergency Lighting for Diesel Generator Room 1A and Switchgear Room 1E, Revision 1

H-41508, Unit 1 P&ID, Turbine and Control Building Fire Protection Piping, Revision 7

H-41509, Units 1&2, P&ID for Diesel Generator Carbon Dioxide System, Revision 5

H-51165, Unit 2 HPCI Oil Piping P&ID, Revision 1

H-51689, Sheet 11, Unit 2 HPCI Sys 2E41 Elementary Diagram, Revision 2

S-52429, Fire Rated Penetration Seal Qualification Data, Drawing Nos. 4, 6, 8, 10, 15, SWR-2, SWR-6, SWR-10

PROMATEC Technologies, Inc., Installation Drawing Package S55054, Revision A

ENGINEERING EVALUATIONS

Edwin I. Hatch Nuclear Plant Units 1 and 2 10 CFR 50.48 and Appendix R Updated Fire Hazards Analysis and Fire Protection Program, Revision 18C

Hatch Nuclear Plant Units 1 and 2 Safe Shutdown Analysis Report, Revision 20

PROMATEC Technologies, Inc., PSI-001, Technical Evaluation of PROMAT-H One Hour and Three Hour Fire Barriers, Revision 1

OTHER DOCUMENTS

UFSAR for E. I. Hatch Nuclear Plant Units 1 and 2

GE Report EAS-19-0388, Elimination of Suppression Pool Temperature Limit for Hatch, dated March, 1988

NEDO-32405P, Power Uprate Safety Analysis Report for Hatch, dated December, 1994

Fire Test Report, SR-87-005; ASTM E 136-79 of PROMAT-H; dated 03/27/1987

Fire Test Report, SR-90-002B; Three Hour Test 15mm PROMAT-H Cladding over Concrete Masonry Wall; dated 02/28/1990

Fire Test Report, SR-90-005; Three Hour Wall Test PROMAT-H; dated 06/06/1990

Plant Hatch Maintenance Rule Monthly Report for Appendix R Emergency Lights, dated July 2000

Plant Hatch Maintenance Rule Monthly Report for Appendix R Access Fire Doors, dated July 2000

Plant Hatch Fire Actions Log, Procedure 31GO-OPS-011-OS, Operation Form OPS-1354, dated 10/13/1999 to 03/17/2000

Operations Training Job Performance Measure LR-JP-39.16-10; From the Remote Shutdown Panel, Start RCIC for Injection into the Reactor; Dated 03/06/00

Operations Training Job Performance Measure LR-JP-25014-08; With a Fire, Prepare RCIC for Operation from the Remote Shutdown Panel; dated 04/14/00

Operations Training Lesson Plan LR-LP-20201-15, Abnormal and Emergency Procedure Reading 2000/01, dated 12/15/99

Operations Training Simulator Guide LT-SG-50347-06, ATWS/Shutdown from Outside the Control Room, dated 05/17/99

Operations Training Simulator Guide LT-SG-50343-06, Recirc Pump Trip/Fire in the Cable Spreading Room, dated 10/07/99

Operations Training System Information Document SI-LP-05201-00, Remote Shutdown Panel, dated 11/04/98

CONDITION REPORTS INITIATED DURING THIS INSPECTION

CO-0007118

CO-0007119

CO-0007120

LIST OF ACRONYMS USED

BWR	Boiling Water Reactor
CO ₂	Carbon Dioxide
FHA	Fire Hazards Analysis
GL	Generic Letter
HPCI	High Pressure Coolant Injection
HVAC	Heating Ventilation and Air Conditioning
IPEEE	Individual Plant Examination for External Events
KV	Kilovolt
MCR	Main Control Room
NFPA	National Fire Protection Association
P&ID	Piping and Instrumentation Drawing
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SCBA	Self-Contained Breathing Apparatus
SNC	Southern Nuclear Operating Company, Inc.
S/RV	Safety/Relief Valve
SSA	Safe Shutdown Analysis
SSD	Safe Shutdown
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and

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increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.