



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931

July 27, 2001

Southern Nuclear Operating Company, Inc.
ATTN: Mr. J. B. Beasley, Jr., Vice President
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC INSPECTION REPORT
50-424/01-04, 50-425/01-04

Dear Mr. Beasley:

On June 29, 2001, the NRC completed a triennial inspection at your Vogtle Electrical Generation Plant, Units 1 and 2. The enclosed report documents the results of this inspection which were discussed on July 17, 2001, with Mr. P. Rushton and other members of your staff.

The inspection examined 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance 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 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/

Charles R. Ogle, Chief
Engineering Branch 1
Division of Reactor Safety

Docket Nos.: 50-424, 50-425
License Nos.: NPF-68, NPF-81

Enclosure: NRC Inspection Report 50-424, 425/01-04
w/Attachment

SNC

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cc w/encl: (See page 2)

SNC

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cc w/encl:

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SNC

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U. S. NUCLEAR REGULATORY COMMISSION (NRC)

REGION II

Docket Nos. 50-424, 50-425

License Nos. NPF-68, NPF-81

Report Nos: 50-424/01-04, 50-425/01-04

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

Facility: Vogtle Electric Generating Plant, Units 1 and 2

Location: 7821 River Road
Waynesboro, GA 30830

Dates: June 25- 29, 2001

Inspectors: D. Billings, Resident Inspector, Oconee
E. Brown, Resident Inspector, Brunswick (Lead Inspector)
P. Fillion, Reactor Inspector, Region II
G. Wiseman, Senior Reactor Inspector, Region II

Approved by: C. Ogle, Chief
Engineering Branch 1
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000424-01-04, IR 05000425-01-04, on 06/25-29/2001, Southern Nuclear Operating Company, Vogtle Electric Generating Plant, Units 1 and 2. Triennial fire protection baseline inspection.

The inspection was conducted by a team of regional and resident inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/index.html>. No findings of significance were identified.

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, 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 to verify that the post-fire safe shutdown (SSD) capability and the fire protection features ensured that at least one post-fire SSD success path was maintained free of fire damage. The fire areas were chosen based on a review of the fire risk ranking in the licensee's Individual Plant Examination for External Events (IPEEE) and walkdowns of fire areas containing systems or components required for post-fire SSD. 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:

- Fire Area 1-CB-L1-A, Control Building Level 1: Included fire zones 105-1 (Unit 1 main control room), 105-2 (Unit 2 main control room), 106 (kitchen), and 183A (conference room). The unit specific main control rooms (MCRs) were physically separate but contained within a common area which included the units' back panels. A fire in this area could require evacuation of the control room for both units and alternate shutdown of both units from their respective Train B remote shutdown panels (RSDPs).
- Fire Area 1-CB-LA-G, Control Building, Level A: Includes fire zones 91 (Train A 4160 volt (V) switchgear room), and 103 (Train A shutdown room). This fire area contained Train A and SSD cables, safety related 4160V switchgear 1AA02, sequencer board 1ACPSQ1, and the Train A RSDP for Unit 1. A fire in this zone could require shutdown of Unit 1 from the MCR using SSD Train B.
- Fire Area 1-CB-LA-H, Control Building, Level A: Fire zone 92 (Train B 4160V Switchgear room). This fire area included Train B and SSD cables, safety related 4160V switchgear 1AA03, and sequencer board 1BCPSQ2. A fire in this zone could require shutdown of Unit 1 from the control room using SSD Train A.
- Fire Area 2-CB-LA-N, Control Building, Level A: Included fire zones 85 (East-West Corridor) and 86 (North-South Corridor). This fire area included the Diesel Generator Train A cable bus, several steam generator feedwater flow transmitters and Train A shutdown cables. A fire in this area could require shutdown of Unit 2 using SSD Train B from the MCR.

The team reviewed the UFSAR Section 9.5.1, applicable Safety Evaluation Reports, electrical one-line drawings, cable routing data, and system flow diagrams for a selected

sample of SSD systems/components to determine if the systems selected by the licensee would support the SSD requirements provided in Branch Technical Position (BTP) Chemical Engineering Branch (CMEB) 9.5-1, Position C.5.c, Alternative or Dedicated Shutdown Capability.

b. Findings

No findings of significance were identified.

.2 Fire Protection of Safe Shutdown Capability

a. Inspection Scope

The team reviewed the Vogtle Electric Generating Plant (VEGP) Fire Hazards Analysis (FHA) and administrative fire prevention/combustible fire hazards control procedures to determine if they satisfied the objectives established by the NRC-approved fire protection program. The team toured the selected plant fire areas observing the licensee's implementation of these procedures for limiting fire hazards. The team also reviewed the plant fire incident reports resulting from fire, smoke, sparks, arcing, and equipment overheating incidents for the period 2000-2001 to assess the effectiveness of the fire prevention program and any maintenance-related or material condition problems related to fire incidents.

The team reviewed the design of the reactor coolant pump (RCP) oil collection system enclosures to assess their ability to collect any oil leakage and spray from the oil cooler, oil lift system, upper oil level alarm piping, the upper oil pot, and the lower pump area in accordance with the requirements of BTP CMEB 9.5-1, Position C.7.a, Guidelines for Specific Plant Areas. The team also reviewed the RCP operational procedures to assess whether sufficient procedural guidance was provided to verify that the RCP oil collection tank was normally maintained empty and that the plant operators could identify an oil leak from the lubrication system of one of the RCP motors and take appropriate action.

The team performed a walk down of the primary and secondary fire brigade dress-out areas to assess the condition of fire fighting equipment. Fire brigade fire fighting and personal protective equipment was reviewed to evaluate equipment accessibility and functionality. The team also evaluated whether backup emergency lighting was provided in the fire brigade dress-out areas in support of fire brigade operations should a power failure occur from any cause during a fire emergency. The adequacy of the fire brigade self-contained breathing apparatuses (SCBAs) was reviewed as well as the availability of supplemental breathing air tanks. Team members also performed walk downs of the selected fire areas and compared the associated fire fighting pre-plan drawings with as-built plant conditions to determine whether they were consistent with the fire protection features and potential fire conditions described in the FHA.

The team reviewed the fire alarm response procedure, the fire brigade drill program procedure, fire fighting preplan procedure, and observed fire brigade response from the control room and locally during an unannounced fire brigade drill in fire zone 91, Train A

4160V switchgear room. The team observed the drill to verify that: 1) the fire brigade properly donned their protective clothing and turnout gear; 2) SCBAs were properly worn and used; 3) fire hoses were capable of reaching the location and properly laid out; 4) the fire brigade made a controlled fire area entry; 5) the fire fighting pre-plan was utilized; 6) the fire brigade leader's directions were clear; and, 7) radio communications were effective. The team also evaluated whether the fire brigade performed a search for smoke and/or fire propagation, as well as search activities for fire victims. The team observed the critique after the drill to evaluate if the brigade's response and drill performance met the established drill objectives in accordance with Procedure 92030-C, Fire Drill Program, Revision 8. Previous critiques of other operating shifts' drill performances and the fire brigade training/drill records were reviewed to determine if the fire brigade personnel qualifications and drill participation met the requirements of the licensee's approved fire protection program.

Additionally, the team reviewed flow diagrams and flooding analysis calculations, associated with the control building floor drains, to determine if systems and operator actions required for post-fire SSD would not be impacted by leakage or flooding from fire suppression activities or rupture of fire suppression systems.

b. Findings

No findings of significance were identified.

.3 Post-Fire Safe Shutdown Circuit Analysis

a. Inspection Scope

On a sample basis, the team reviewed the electrical schematics for control circuits of selected SSD components and looked for the potential effects of open circuits, short circuits, and shorts to ground. In addition, circuit cable routing information was evaluated for potential damage as a result of fire in the selected fire areas. Specific circuits reviewed included the primary power operated relief valve PV-455A and its block valve HV-8000A. Emergency lighting and security system equipment such as vital area doors were considered and inspected as well.

The team reviewed the licensee's breaker/fuse coordination analysis against the BTP CMEB 9.5-1, Position C.5.c.7 requirement that SSD equipment and systems for each fire area be isolated from associated circuits in the fire area. A sample of electrical system buses which supplied SSD equipment was reviewed including 4160V buses, 480V load center buses, motor control centers and 120V alternating current distribution panels.

b. Findings

No findings of significance were identified.

.4 Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the licensee's procedures for fire response and alternative safe shutdown (ASSD) capability for the fire areas selected in accordance with BTP CMEB 9.5-1. Selected portions of the procedures were walked down to verify that the procedures could be performed within the required times, given the minimum required staffing level of operators, concurrent with a loss of offsite power. 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 reviewed the electrical isolation and protective fusing in the transfer circuits of selected components (e.g., motor operated valves and safety relief valves) required for post-fire SSD at RSDPs to verify that the SSD components were physically and electrically separated from the fire areas. This review included examining the electrical isolation and calibration data packages for a sample of instruments (e.g., pressure and level indicators) used for SSD. The team's review also included verifying that SSD equipment could be powered from both onsite and offsite power. Portions of completed surveillance test procedures were reviewed for the RSDP and the 4160V Train A and Train B switchgears to establish whether the licensee conducted periodic operational tests of the alternative shutdown transfer capability and instrumentation and control functions. The team also walked down selected areas to verify that redundant SSD components were physically separated in accordance with the requirements in BTP CMEB 9.5-1, Position C.5.b.

b. Findings

No findings of significance were identified.

.5 Operational Implementation Of Alternative Safe Shutdown Capability

a. Inspection Scope

The team reviewed the operational implementation of the ASSD capability for a fire in the selected fire areas to verify that: (1) the training program for licensed personnel included alternative or dedicated SSD capability; (2) personnel required to achieve and maintain the plant in hot shutdown from outside the MCR could be provided from normal onsite staff, exclusive of the fire brigade; and (3) the licensee periodically performed operability testing of the ASSD instrumentation and transfer and control functions. The team reviewed the contents of ASSD equipment lockers in accordance with the associated licensee task sheet to verify that equipment needed to implement the ASSD procedures was properly staged and available. Staffing for the fire brigade was reviewed to verify compliance with the Technical Specifications (TS) and that the plant could be shut down with the minimum required shift staffing exclusive of the fire brigade. The team reviewed the training requirements for the shift incident commander, fire brigade members, and related support personnel such as reactor operators (ROs) and senior reactor operators (SROs) to verify compliance with the licensee's fire protection program. The team reviewed lesson plans

and job performance measures (JPMs) to verify that ASSD activities were included in the training program.

b. Findings

No findings of significance were identified.

.6 Communications for Performance of Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the periodic testing procedures for the ASSD sound-powered phone system and licensee surveillances of ASSD operator equipment to assess whether the surveillance test program for the sound-powered phones was sufficient to verify proper operation of the system. The team walked down the remote shutdown equipment identified in Abnormal Operating Procedure, 18038-1, Operation From Remote Shutdown Panels, Revision 26, to verify that the ASSD sound-powered phone jacks were in good condition, free of foreign material, and installed at the proper locations to support required shutdown actions identified in the procedures.

b. Findings

No findings of significance were identified.

.7 Emergency Lighting for Performance of Alternative Shutdown Capability

a. Inspection Scope

The team reviewed the design, operation, and manufacturer's data sheets for the installed individual direct current (DC) emergency lighting system self-contained, battery powered units. This review was performed to verify that battery power supplies were rated with at least an 8-hour capacity as required by BTP CMEB 9.5-1, Position C.5.g.1. The team performed a walk down of the remote shutdown equipment identified in Abnormal Operating Procedure, 18038-1, Operation From Remote Shutdown Panels, Revision 26, to verify that emergency lighting units (ELUs) were operational and the lamp heads were aimed to provide adequate illumination to perform the shutdown actions required by the procedure. The team reviewed the adequacy of emergency lighting for safe-shutdown activities in the selected fire areas to verify that it was adequate for the access and egress pathways to the required SSD equipment. The team also reviewed periodic test and maintenance procedures to determine if adequate surveillance testing was in place to ensure operation of the ELUs in the event of a fire at the site.

b. Findings

No findings of significance were identified.

.8 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed the licensee's credited cold shutdown repairs for the EDG fuel oil transfer pumps and engineered safety feature chillers to verify that necessary equipment used to accomplish repairs would be available. The team also verified that cold shutdown could be achieved and maintained within the time frames specified.

b. Findings

No findings of significance were identified.

.9 Fire Barrier and Fire Area/Zone/Room Enclosures and Penetration Seals

a. Inspection Scope

The team reviewed the selected fire areas to evaluate the fire resistance of walls, ceilings, floors, fire barrier penetration seals, fire doors, and fire dampers in accordance with the requirements of BTP CMEB 9.5-1, Position C.7, Guidelines for Specific Plant Areas. Additionally, the team reviewed the design and installation drawings and surveillance and functional test procedures for selected items. The team observed the material condition and configuration of the installed fire barrier features. In addition, the team reviewed the construction details and supporting fire endurance tests for the installed fire barrier features. The team also reviewed the fire loading calculations to verify that the fire loading used by the licensee was appropriate for determining the fire-resistive rating of the fire barrier enclosures. The team reviewed remote shutdown procedures, selected fire fighting preplans, and flow diagrams associated with heating ventilation and air conditioning (HVAC) systems to verify that remote shutdown equipment and operator manual actions would not be inhibited by smoke migration from one fire area to adjacent plant areas used to accomplish SSD. In addition, the team reviewed the licensing documentation and engineering evaluations for National Fire Protection Association (NFPA) code deviations to verify that the fire barrier installations met design requirements and license commitments.

b. Findings

No findings of significance were identified.

.10 Fire Protection Systems, Features, and Equipment

a. Inspection Scope

The team reviewed flow diagrams, cable routing information, periodic tests, and operational valve lineup procedures associated with the fire pumps and fire protection water supply system. The review was performed 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. Additionally, team

members performed a walk down of the electric and diesel driven fire pumps and portions of the fire protection water supply system in the selected areas to assess the material condition, operational effectiveness, and whether the design of the manual fire fighting fire hose equipment and fire extinguishers were properly reflected in the fire brigade fire fighting pre-plans.

Also, the team's review was performed to verify that adequate fire protection features were installed in accordance with the separation and design requirements of BTP CMEB 9.5-1, Positions C.5 and C.6. The team walked down accessible portions of the fire detection and alarm systems in the 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 NFPA code of record. Additionally, the team reviewed the adequacy of the design and installation of the fire sprinkler and manual fire hose and standpipe systems for fire zone 85. Team members performed a walk down of the selected areas to ensure proper placement and spacing of sprinkler heads and lack of obstructions. Vendor design calculations were verified to ensure that the required water flow and density for the area were available. The team reviewed a sample of hose lengths to verify that they could reach the SSD equipment.

b. Findings

No findings of significance were identified.

.11 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 SSD systems or components was properly assessed and adequate compensatory measures were implemented in accordance with the licensee's fire protection program procedure 92040-C, Fire Protection LCO Program Procedure, Revision 15.

b. Findings

No findings of significance were identified.

.12 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed a sample of condition reports to verify that items related to fire protection were entered in the licensee's corrective action program in accordance with licensee procedural requirements. The items selected were reviewed for classification and

for the appropriateness of the corrective actions taken to resolve the issues. The team reviewed selected operating experience items related to fire protection to determine if they were dispositioned appropriately.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 MANAGEMENT MEETINGS

.1 Exit Meeting Summary

The lead inspector presented the inspection results to Mr. J. Gasser, General Manager, and other members of licensee management and staff at the conclusion of the inspection on June 29, 2001. A followup call was held with Mr. P. Rushton, Assistant General Manager - Support, and other licensee staff members on July 17, 2001, to discuss the inspection results. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

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W. Bargeron, Operations Manager
W. Burmeister, Engineering Manager
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J. Gasser, General Manager
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J. Mintz, Shift Support Supervisor - Operations
P. Rushton, Assistant General Manager - Support
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D. Whitehurst, Senior Engineer
J. Williams, Maintenance Manager
J. Williams, BOP Engineering Supervisor

NRC

T. Morrissey, Resident Inspector
J. Zeiler, Senior Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

PROCEDURES

00012-C, Shift Manning Requirements, Revision (Rev.) 14
10000-C, Conduct of Operations, Rev. 50
11877-2, Cold Weather Checklist, Rev. 10
14445-2, Remote Shutdown Monitoring Instrumentation Channel Check, Rev. 3
14710-1, Remote Shutdown Panel Transfer Switch And Control Circuit 18 Month Surveillance Test, Rev. 22
14952-C, Fire Suppression System-Annual System Pump Test, Rev. 7
14961-C, Emergency Lighting Surveillance, Rev. 27
17103A-C, Annunciator Response Procedures For Fire Alarm Computer, Rev. 4
17103B-C, Annunciator Response Procedures For Fire Alarm Computer, Rev. 4
17103B-C, Annunciator Response Procedures for Fire Alarm Computer, Rev. 2
18031-C, Abnormal Operating Procedure, Loss of Class 1E Electrical Systems, Rev. 18
18038, Abnormal Operating Procedure, Operation From Remote Shutdown Panels, Rev. 26
25513-C, Installation of Penetration Seals, Rev. 7
25743-C, Thermon Solid State Heat Tracing and Freeze Protection System Calibration and Maintenance, Rev. 12
29121-C, Fire and Smoke Detection Operational Test, Rev. 19
29124-C, Fire Doors Inspection, Rev. 11
29135-C, Fire Hose Station 18 Month Inspection, Rev. 5
29142-C, Sprinkler System Visual Inspection and Cleaning, Rev. 7
29143-C, Fire Dampers Visual Inspection, Rev. 9
29144-C, Fire Area Boundaries and Fire Rated Penetration Seals 18 Month Visual Inspection, Rev. 13
29152-C, Fire Hose Station 3 Year Flow Verification and Hydrostatic Inspection, Rev. 5
83304-C, Check Valve Monitoring Program, Rev. 9
85032-C, Penetration Seal Inspection, Rev. 2
92000-C, Fire Protection Program, Rev. 14
92015-C, Use, Control, and Storage of Flammable/Combustible Materials, Rev. 21
92030-C, Fire Drill Program, Rev. 8
92035-C, Fire Protection Operability Requirement, Rev. 13
92040-C, Fire Protection LCO Program Procedure, Rev. 15
92785-2, Zone 85 - Control Building - Level A Fire Fighting Preplan, Rev. 3
92791-1, Zone 91 - Control Building - Level A Fire Fighting Preplan, Rev. 3
92792-2, Zone 92 - Control Building - Level A Fire Fighting Preplan, Rev. 2
92805-1, Zone 105 - Control Building - Level 1 Fire Fighting Preplan, Rev. 2
92805-2, Zone 105 - Control Building - Level 1 Fire Fighting Preplan, Rev. 1
RQ-JP-18038-002, Job Performance Measure to Establish Local Control of the Plant at the Shutdown Panel, Rev. 0
RQ-JP-21420-003-01, Job Performance Measure to Locally Operate Steam Generator ARV Daily Schedule Control Sheet, Task: Inventory PSDA and PSDB Emergency Lockers

DESIGN CRITERIA AND CALCULATIONS

X3CT08, Fire Event Safe Shutdown Circuit Analysis, Rev. 16
 MX3CT08, Evaluate Protective Device Coordination for DC Control Power to Class 1E 4.16kV Swgr, Rev. 1
 X3CA26, Protective Relaying Calculation, Rev. 4
 X4C2301S012, Fire Hazards Analysis: Combustible Loadings, Unit 1, Rev. 11
 X4C2301S038, Fire Hazards Analysis: Combustible Loadings, Unit 2, Rev. 5
 X4C23015146, Fire Protection Hydraulic Calculation for Sprinkler System , Control Building, Level A, Rev. 1
 X4C2301S035, Control Room Fire Alternate Shutdown Evaluation, Rev. 7
 X6CXC-32, Flooding Analysis, Control Building, Level A, Rev. 4

DRAWINGS

AX2D11F002, -F024, Control Building Steel Framing Plans, Rev. 24
 AX4DJ2106- Series, Control Bldg. HVAC Plan, Area 2A, Rev. 17
 AX4DJ2107- Series, Control Bldg. HVAC Plan, Area 2B, Rev. 20
 AX4DJ8024, Fire Areas, Control Building, Level A, Rev. 5
 AX4DJ8025, Fire Areas, Control Building, El. 200'-0," Level A, Rev. 10
 AX4DJ8026, Fire Areas, Control Building, El. 220'-0," Level 1, Rev.11
 CX4DB173- Series, P&ID - Fire Protection -Yard Piping-System No. 2301, Rev. 21
 1X3DJ002-A- Series, Fire Detection Plan for Control Building Level A, Unit 1, Rev. 2
 1X3A001-278, Detector Location Plan for Control Building Level 1, Rev. 6
 1X3D-AA-M01B, Simplified One Line Diagram Fire Event Safe Shutdown Loads Train B, Rev. B
 1X3D-AA-F03A, One Line Diagram 480 V Motor Control Center 1ABC, Rev. 24
 1X3D-AA-F04A, One Line Diagram 480 V Motor Control Center 1BBC, Rev. 28
 1X3D-BD-C01B, Elementary Diagram Chemical & Volume Control System 1-1208-P6-003-M01, Rev. 8
 1X3D-BA-D03D, Elementary Diagram Electrical System 4160 V Incm. Brkr. 152-1BA0319 From Emergency Diesel Generator, Rev. 12
 1X3D-BD-B03H, Elementary Diagram Reactor Coolant System 1PV-055A, Rev. 8
 1X3D-BD-B02A, Elementary Diagram Reactor Coolant System 1HV-8000A, Rev. 6
 1X6A-U01-167-11, Process Control Block Diagram Pressurizer Levels, Rev. 8
 1X6A-U01-190-13, Process Control Block Diagram Steam Generator Level (Wide Range)
 1X3D-F302-1, Conduit/Tray Plan Area O, Elevation 200 ft., Level A, Control Building, Unit 1
 1X4DB115, P&ID, Chemical and Volume Control System, 1X4DB115, Rev. 26
 1X4DB116-1, P&ID, Chemical and Volume Control System, Rev. 39
 1X4DB116-2, P&ID, Chemical and Volume Control System, Rev. 26
 1X4DJ2102, Control Bldg. HVAC Plan, Area 2A & 2D, Level A, Rev. 15
 1X4DB114, Piping and Instrumentation Diagram (P&ID) Chemical and Volume Control System, Rev. 36
 1X4DJ2115, Control Bldg. HVAC Plan, Area 2D & 2E, Level A, Rev. 15
 1/2X4DB174- Series, P&ID - Fire Protection -Water System No. 2301, Rev. 18
 1X4DB174- 1, P&ID - Fire Protection -Water & Halon Systems No. 2301 & 2304, Rev. 14
 1X4DB213-1, P&ID - Purification & Clean-up System No. 1505, 1506, 1508, Rev. 29
 2X1D11J031, 30 and 31, Control Building Architectural Penetration Seal, Interior Elevation

Level A, Rev. 5
 2X4DB210, P&ID - Control Building Normal HVAC System No. 1533, Rev. 9
 2X4DH2101, Control Building Equipment and Drain System, Level A, Rev. 2
 2X1D11H010, Control Building Architectural Penetration Seal, Floor Plan Level A, Rev. 6
 2X3D-BG-C010, Control Building Elementary Diagram, HVAC System Level 1, AHY-12162B,
 Rev. 5
 9510-AX4AJ21-2, -3, -4, -5, Fire Damper Installation, Rev. 3

DCS-AX3DJ101-E, Fire Detection Plan, Control Building Level 1, Rev. 7
 DCS-2X3DJ102-C, Fire Detection Plan, Control Building Level A, Unit 2, Rev. 3
 V-C-30-10, Insulation Consultant & Management Service - Smoke & Hot Gases Seal, Conduit,
 Ceramic Fiber, Rev. 2
 V-E-04-21, Insulation Consultant & Management Service - Fire, Air&Water Seal, Electrical
 Penetration Blockout, Elastomer, Rev. 1

ENGINEERING EVALUATIONS

REA No.: 01-VAA048, Preliminary SSD Sprinkler Evaluation Regarding Coordination Issues,
 Rev. 0
 X4C23015024, SSD Sprinkler Evaluations, Rev. 0

APPLICABLE CODES AND STANDARDS

NFPA 10, Standard for the Installation of Portable Fire Extinguishers, 1981 Edition
 NFPA 13, Standard for the Installation of Sprinkler Systems, 1983 Edition
 NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 1983 Edition.
 NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection, 1982 Edition.
 NFPA 20, Standard for the Installation of Centrifugal Fire Pumps, 1983 Edition
 NFPA 72D, Standard for the Installation, Maintenance, and Use of Proprietary Protection
 Signaling Systems, 1979 Edition
 NFPA 72E, Standard on Automatic Fire Detectors, 1982 Edition.
 NFPA 80, Standard on Fire Doors and Windows, 1983 Edition.
 NFPA 90A, Standard on Air Conditioning and Ventilating Systems, 1981 Edition.
 NUREG-1552, Supplement 1, Fire Barrier Penetration Seals in Nuclear Power Plants, dated
 January 1999

AUDITS, AND SELF ASSESSMENTS

SAER Audit of Fire Protection Program, OP20-00/09, VSAER-2000-068
 SAER Audit of Fire Protection Program, OP20-99/09, VSAER-99-061
 SAER Audit of Fire Protection Program, OP20-98/14, VSAER-98-091

CONDITION REPORTS (CR) GENERATED AS A RESULT OF INSPECTION ACTIVITIES

CR 2001001493, Fire Response Procedure Discrepancy
 CR 2001001494, Material Condition of Fire Water Supply Tank Freeze Protection
 CR 2001001503, Missing Condulet Cover

CR 2001001507, Fire Protection Pressure Indicator not in PM Program
CR 2001001508, Fire Protection Check Valve not in PM Program
CR 2001001509, Validation of Logic Used in Performing Steps in SSD Procedure
CR 2001001510, Flood Analysis Results not Translated into SSD Procedures or Pre-Fire Plans
CR 2001001521, Fire Protection System Freeze Protection not Addressed in Cold Weather Checklist
CR 2001001522, Flood Analysis Calculation Discrepancies
CR 2001001526, Obstructed Sprinklers in Fire Pump House
CR 2001001527, Backup Emergency Lighting to Support Fire Brigade Dress Out
CR 2001001529, Fire Protection Engineering Review of SSD Procedure Changes
CR 2001001530, Circuit Analysis for Fire Protection Water Supply System MOVs
CR 2001001535, Fuse/Breaker Coordination Study Issues
CR 2001001537, Safe Shutdown Coordination Study Discrepancies

OTHER DOCUMENTS

Southern Company Services Plant Data Management System Report (cable routing information)
Technical Specifications, Section 5.0, Administrative Controls
VEGP-FSAR-9.5.1, Fire Protection Program, Rev. 7
VEGP-FSAR-9.5.1, Appendix 9A, Fire Hazards Analysis, Rev. 4
VEGP-FSAR-9.5.1, Appendix 9B, Comparison of VEGP Units 1 and 2 with Requirements of the Branch Technical Position CMEB 9.5-1, Rev. 7
VEGP Fire Brigade Lesson Plan No. FP-LP-00106-09-C, Fire Streams, dated August 2000
VEGP Fire Brigade Lesson Plan No. FP-LP-01105-01-C, Fire Team Captain Training, dated August 1999
VEGP Fire Report No. 2000-001, dated June 2000
VEGP Fire Report No. 2001-001, dated June 2001
VEGP Fire Drill Scenario No. 2001-Q2-5, dated June 2001
VEGP-1, 1-3KN-01, Halon System 1-2304-R4-002 Discharge Concentration Verification, dated November 1986