



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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September 21, 2004

Southern Nuclear Operating Company, Inc.
ATTN: J. T. Gasser, Vice President
Vogtle Electric Generating Plant
P. O. Box 1295
Birmingham, AL 35201-1295

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT - NRC TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000424/2004007 AND
05000425/2004007**

Dear Mr. Gasser:

On August 26, 2004, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant, Units 1 and 2. The enclosed inspection report documents the inspection findings, which were discussed on that date with Mr. William Kitchens and other members of your staff. Following completion of additional review in the Region II office, a re-exit was held by telephone with Mr. K. Holmes of your staff on September 20, 2004, to provide an update on changes to the preliminary inspection findings.

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.

This report documents one NRC-identified finding of very low safety significance (Green) involving a violation of NRC requirements. However, because of the very low safety significance and because it is entered into your corrective action program, the NRC is treating the finding as a non-cited violation (NCV) consistent with Section VI.A of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Vogtle.

In accordance with 10 CFR 2.390 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/reading-rm/adams.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: Inspection Report 05000424/2004007 and 05000425/2004007
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-424, 50-425

License Nos.: NPF-68, NPF-81

Report Nos.: 05000424/2004007 and 05000425/2004007

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

Facility: Vogtle Electric Generating Plant

Location: 7821 River Road
Waynesboro, GA 30830

Dates: August 9 - 13, 2004 (Week 1)
August 23 - 26, 2004 (Week 2)

Inspectors: K. O'Donohue, Fire Protection Team Leader
N. Merriweather, Sr. Reactor Inspector (Team Lead)
P. Fillion, Reactor Inspector
G. Wiseman, Sr. Reactor Inspector

Accompanying Personnel: G. Cameron, Fire Protection Co-op (Week 1)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000424/2004-007, 05000425/2004-007; 08/09 -13/2004 and 08/23 - 26/2004; Vogtle Electric Generating Plant, Units 1 and 2; Triennial Fire Protection.

The report covered an announced two-week period of inspection by four regional inspectors. One Green non-cited violation was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A non-cited violation of Operating License Condition 2.G, was identified for an inadequate fire brigade fire fighting pre-plan. The pre-plan was inadequate in that it gave instructions for the fire brigade to vent smoke and hot gases into an area that the operators needed to access to perform local manual actions. Specifically, the fire fighting pre-plan (92773-2) for Fire Zone (FZ) 73 of the Control Building directed the fire brigade to vent smoke and hot gases out of the fire area (FZ 73) into room RB-33 (FZ 80). However, RB-33 is the only available route for an operator to enter room RB-29. The operator is required to enter room RB-29 during a fire in FZ 73 in order to perform local manual actions to prevent spurious opening of pressurizer power operated relief valve (PORV) PV-0455A. If the fire brigade had vented smoke and toxic gases into RB-33, it could have resulted in a failure to prevent spurious opening of PORV PV-0455A. Upon identification, the licensee revised the fire fighting pre-plan (92773-2) to vent the smoke into a stairwell rather than room RB-33.

This finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective, in that movement of smoke and hot toxic gases as directed could prohibit operator access to equipment that was supposed to remain unaffected by a particular fire. This finding was determined to be of very low safety significance because other fire protection features, such as passive fire barriers, automatic fire suppression, and safe shutdown capability from the main control room were still available. (Section 1R05.02)

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems and Barrier Integrity

1R05 Fire Protection

The purpose of this inspection was to review the Vogtle Electric Generating Plant (VEGP) fire protection program (FPP) for selected risk-significant fire areas. Emphasis was placed on verification that the post-fire safe shutdown (SSD) capability and the fire protection features provided for ensuring that at least one redundant train of SSD systems is maintained free of fire damage. The inspection was performed in accordance with the U. S. Nuclear Regulatory Commission's (NRC) Reactor Oversight Process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The inspectors used the licensee's Individual Plant Examination for External Events (IPEEE) and in-plant tours to choose three risk-significant fire areas for detailed inspection and review. The fire areas (zones) chosen for review during this inspection were:

- Fire Area 1-AB-LD-B, Fire Zone (FZ) 38, Unit 1 Auxiliary Building Level A. This area contains 2- and 3-hour fire barriers. This area involves shutdown from the control room using safe shutdown train B. Also limited use of the remote shutdown panel may be required.
- Fire Area 1-CB-LC-A, FZ 42B, Unit 1 Control Building and Fueling Handling Building, Level A, B, and C. This area contains 3 hour barriers. This area involves shutdown from the control room using safe shutdown train B.
- Fire Area 2-CB-LB-A, FZ 73, Unit 2 Control Building Level B. This fire area contains 2- and 3-hour fire barriers. This area involves a shutdown from the control room using safe shutdown train B. Potential fire damage to the reactor trip breakers may necessitate ensuring a reactor trip by some other means.

The inspectors evaluated the licensee's FPP against applicable requirements, including Operating License Condition 2.G; Title 10 of the Code of Federal Regulations, Part 50.48; commitments to Branch Technical Position (BTP) Chemical and Mechanical Engineering Branch (CMEB) 9.5-1; VEGP Updated Final Safety Analysis Report (UFSAR); related NRC safety evaluation reports (SERs) documented in NUREG 1137 including all applicable supplements; and plant Technical Specifications. The inspectors evaluated all areas of this inspection, as documented below, against these requirements.

Specific documents reviewed by the inspectors are listed in the attachment.

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

a. Inspection Scope

The licensee's fire hazard analysis (FHA) described in the UFSAR for each plant area includes an evaluation of safe shutdown capability given a fire in that particular area. The evaluation identifies which safe shutdown train (A or B) is to be used in the event of a fire in an area or in a zone of that area. The evaluation also identifies the possible spurious actuations that can result from a fire in each area. Actions to overcome the spurious operations or compensatory measures taken are described in the plant procedures.

The licensee's safe shutdown analysis (SSA) was reviewed by the inspectors to determine the components and systems necessary to achieve and maintain SSD conditions from the main control room (MCR) in the event of fire in FZs 38, 42B, and 73. The objectives of this evaluation were to:

- Verify that the licensee's shutdown methodology had correctly identified the components and systems necessary to achieve and maintain an SSD condition.
- Confirm the adequacy of the systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions.
- Verify that an SSD can be achieved and maintained without off-site power when it can be confirmed that a postulated fire in any of the selected fire areas could cause the loss of off-site power.
- Verify that local manual operator actions are consistent with the plant's fire protection licensing basis.

The inspectors performed sufficient inspection activity to verify that the licensee's shutdown methodology had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions. All of the shutdown functions were addressed to some extent with more emphasis placed on reactor coolant system inventory control, reactor coolant pump seal protection, and secondary side isolation. Of the fire areas chosen, the licensee's analysis concluded that cable damage would not lead to a loss of offsite power. The IPEEE assumed a loss of offsite power in Fire Area 1-AB-LD-B; however, further investigation by the team determined that there was no fire-induced mechanism to cause a loss of offsite power associated with this area. The team reviewed the routing of cables associated with one of the reserve auxiliary transformer differential relays (current transformer and trip circuit) to independently check that the licensee's conclusions regarding loss of offsite power were correct.

b. Findings

No findings of significance were identified.

.02 Fire Protection of Safe Shutdown Capability

a. Inspection Scope

For the selected fire areas/zones, the inspectors evaluated the potential for fires, the combustible fire load characteristics, potential exposure fire severity, the separation of systems necessary to achieve safe shutdown, and the separation of electrical components and circuits to ensure that at least one safe shutdown path was free of fire damage. The inspectors reviewed selected portions of the UFSAR Section 9.5.1, Fire Protection Program, Appendix 9A, Fire Hazards Analysis, and Appendix 9B, Comparison of VEGP Units 1 and 2 with Requirements of the BTP CMEB 9.5-1. This review was conducted to determine if the licensee's commitments, as established in the fire protection licensing basis documents, were satisfied.

The inspectors reviewed the licensee's documents which establish and implement controls and practices to prevent fires and to control the storage of permanent and transient combustible materials and ignition sources, to verify that the objectives established by the NRC-approved fire protection program were satisfied. The documents reviewed are listed in the attachment.

The inspectors reviewed the basic layout of the plant and raceway system to verify that it provided good physical separation of redundant circuits, therefore limiting the possibility that redundant circuits would be routed in the same fire zone. For example, there were two separate main control room termination cabinet/cable spreading rooms, one below the control room for Train A cables and one above the control room for Train B cables. In addition, the team walked down the selected fire zones to look for cases of redundant cables routed in the same zone.

The inspectors toured the selected plant fire areas/zones to observe: (1) the material condition of fire protection systems and equipment, (2) the storage of permanent and transient combustible materials, and (3) the licensee's implementation of the programmatic procedures for limiting fire hazards, combustible waste collection, housekeeping practices, and cleanliness conditions. These reviews were accomplished to ensure that the licensee was maintaining the fire protection systems, had properly evaluated in-situ combustible fire loads, controlled hot-work activities, and limited transient fire hazards in a manner consistent with the UFSAR, administrative procedures and other fire protection program procedures. In addition, the inspectors reviewed design control procedures to determine if plant changes were adequately evaluated for the potential impact on the fire protection program, safe shutdown equipment, and plant procedures (as required by the fire protection program).

The inspectors reviewed operator and fire brigade staffing, fire brigade response, fire brigade qualification training and drill program procedures, and fire brigade drill critiques for brigade shifts from January 2002, to August 2004. The reviews were performed to determine whether fire brigade drills had been conducted in high fire risk plant areas and whether fire brigade personnel training, qualifications, manning assignments, drill response, and performance met the requirements of the fire protection program.

The inspectors walked down the primary and secondary fire emergency equipment storage locker locations and dress-out areas to evaluate equipment accessibility and functionality. The inspectors inspected the fire brigade's protective ensembles, self-contained breathing apparatus (SCBA), smoke control equipment, and various fire brigade equipment to determine operational readiness for fire fighting. The fire brigade self-contained breathing apparatuses were reviewed for adequacy as well as the availability of supplemental breathing air bottles and the capability to refill these bottles.

The inspectors reviewed fire fighting pre-fire plans and fire response procedures for the selected fire areas/zones to determine if appropriate information was provided to fire brigade members to identify safe shutdown equipment and to facilitate suppression of an exposure fire that could impact safe shutdown capability. The inspectors walked down the selected fire areas/zones to compare the associated pre-fire plans and drawings with as-built plant conditions and fire response procedures. This was done to verify that fire fighting pre-fire plan instructions and drawings were consistent with the fire protection features and potential fire conditions described in the fire hazards analysis. The inspectors also evaluated whether the fire response procedures and pre-plans for the selected fire areas/zones could be implemented as intended.

The inspectors performed a review of flow diagrams and flooding analysis calculations, for fire suppression-caused flooding associated with the Unit 2 control building floor drains. This review focused on ensuring that those local manual operator actions required for normal redundant train main control room shutdown performed outside the control room would not be inhibited by the effects of the fire event, fire brigade activities, or fire suppression systems within the fire areas/zones or from an adjacent plant area/zone.

b. Findings

Introduction: The inspectors identified a Green non-cited violation (NCV) of Vogtle Electric Generating Plant Unit 2 Operating License Condition 2.G, for an inadequate fire fighting pre-plan procedure. The fire fighting pre-plan procedure, 92773-2, Zone 73 - Unit 2 Control Building - Level B Fire Fighting Preplan, Rev. 0.1, did not have adequate instructions to the fire fighters on how to both remove smoke and toxic gases from the fire affected area and maintaining acceptable environmental conditions for operator access and egress routes to equipment, in some circumstances.

Description: The inspectors evaluated whether the fire response procedures and fire fighting pre-plans for the selected fire area/zones could be implemented as intended. The inspectors noted that the fire fighting pre-plans directed stopping the heating, ventilation, and air conditioning system (HVAC) fan for the area of the fire and then using fire brigade portable fans for smoke removal from the affected room. Installed ventilation systems are then used to remove the smoke from the building. Step 4.3 of the fire fighting pre-plan procedure 92773-2 for FZ 73, directed smoke to be moved into switchgear room RB-33 (FZ 80) and control room personnel be notified to initiate smoke removal actions of procedure 13304-C, Control Building Normal HVAC System. The inspectors observed that 17103A-C, Annunciator Response Procedures For Fire Alarm Computer, Rev. 15.1, step 1e, directs an operator to close pressurizer PORV PV-0455A, by opening a breaker in room RB-29 in response to a fire in FZ 73. The only

available route to RB-29 is through room RB-33. The actions to prevent spurious PORV opening could be inhibited due to the presence of smoke and hot toxic gases moved into RB-33 per 92773-2 smoke removal direction.

In response to this issue, the licensee wrote Condition Report (CR) 2004003416 and made a prompt change to 92773-2, " Zone 73 - Control Building - Level B Fire Fighting Preplan," to direct smoke into a stairwell rather than room RB-33.

Analysis: The finding is greater than minor because it is associated with the protection against external factors attribute and degraded the reactor safety mitigating systems cornerstone objective, in that movement of smoke and hot toxic gases as directed could prohibit operator access to equipment that was supposed to remain unaffected by a particular fire. The finding was screened using Phase 1 of Appendix F of Manual Chapter 0609. The inspectors calculated the average smoke and hot gas temperature within FZ 73 to be approximately 220 °F. This temperature is sufficient to activate sprinklers and fire dampers but would not likely challenge the 3-hour rated walls, doors or penetration seal barriers between FZ 73 and room RB-33. This temperature is significantly less than the temperature required for thermoset cables to be damaged (the type of cables used at VEGP). Based on these results, the inspectors determined this finding to be of very low safety significance (Green) because other area fire protection features, such as passive fire barriers, automatic fire suppression, and safe shutdown capability from the main control room were still available. In addition, the smoke and hot gas layer was calculated to be approximately 5 feet from the ceiling which would allow the fire brigade visibility to locate the fire source and initiate a fire fighting attack without evacuating smoke from the room. Thus, there was a low probability of occurrence of a fire that could require movement of smoke by the fire brigade. A Phase 2 assessment was not required.

Enforcement: Vogtle Electric Generating Plant Unit 2 Operating License Condition 2.G, requires the licensee to implement and maintain the provisions of their NRC-approved fire protection program as described in the UFSAR for the facility. UFSAR Appendix 9B, Section C.1.e.n, states that the fire fighting procedures contain instructions to the fire fighters and operators. Inherent in this requirement is that the instructions must be appropriate and adequate.

Contrary to the above, fire fighting pre-plan procedure, 92773-2, Zone 73 - Unit 2 Control Building - Level B Fire Fighting Preplan, Rev. 0.1 was inadequate because it did not maintain a sufficient environment for operators to access required safe shutdown equipment. Because the finding is of very low safety significance, was entered into the corrective action program (CR 2004003416), and was corrected during the inspection period, this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000425/2004007-001, Inadequate Fire Protection Pre-fire Plan to Maintain Adequate Environmental Conditions for Operators to Access Required Equipment.

.03 Post-fire Safe Shutdown Circuit Analysis

a. Inspection Scope

On a sample basis, the inspectors evaluated the adequacy of separation provided for electrical cables of safe shutdown systems. The inspectors also reviewed relevant portions of three Fire Event Safe Shutdown Evaluations, which contained the licensee's safe shutdown analysis for the selected fire areas. The reports reviewed are listed in the attachment. The analysis intended to show that fire damage to components and cables located within the chosen fire areas would not prevent safe shutdown. The inspectors then focused on any cases of redundant shutdown circuits routed in the same fire area.

The inspectors made a detailed review of selected control circuits as listed in the attachment. Cables that could interfere with safe shutdown if they were routed in the selected fire areas were identified. The inspectors then evaluated the routing of these cables by reviewing the computerized cable schedule which indicated the specific raceways through which the cables were routed together with the fire zone information. The inspectors pin-pointed the location of raceways in the field as necessary to determine if they could be in the zone of influence of fire emanating from transient combustibles or in-situ fire sources.

The inspectors also reviewed a sample of electrical coordination studies to verify that fire induced faults in load cables emanating from required sources of electric power would not cause a loss of power and prevent safe shutdown. Selective coordination for ground faults on the 4160 V system was checked for the following relays: 151NRB (transformer 1XNRB neutral), 151G (at incoming breaker to bus 1BA03) and 150/151GF (at feeder breaker to load center 1NB10). The inspectors examined the installed relay setpoints as well as the last completed calibration records to verify that the relays were installed in accordance with design documents.

b. Findings

No findings of significance were identified.

.04 Alternative Shutdown Capability and Operational Implementation of Alternative Shutdown

a. Inspection Scope

Alternative shutdown capability and operational implementation of alternative shutdown from outside the main control room was not examined during this inspection. This is because the selected fire zones (i.e., 38, 42B, and 73) are train B shutdown areas using the controls in the main control room, for the most part, with limited local manual actions. Manual operations using the train B remote shutdown panel were reviewed as related to fire response for FZ 38. The ability to perform the local manual actions, the access and egress routes for the operators, emergency lighting, and environmental conditions at the remote locations was examined by the team and discussed in other sections of the report.

b. Findings

No findings of significance were identified.

.05 Communications

a. Inspection Scope

The inspectors reviewed plant communication capabilities to evaluate the availability of the communication systems to support fire event notification, fire brigade fire fighting activities, and plant personnel in the performance of manual operator actions to achieve and maintain a safe shutdown condition. The inspectors reviewed the fixed plant communications systems (telephone/page) for use during safe shutdown, as credited in UFSAR Section 9.5.2. The inspectors also reviewed the use of the portable radio system for use during fire fighting activities. Both fixed and portable communication systems were reviewed for the impact of any damage which could result from fires in the selected fire areas/zones on the functions the systems were intended to support, and to ensure that the design of the systems was adequate to support operator and fire brigade actions, as applicable. In addition, the inspectors reviewed completed fire brigade drill critique reports for brigade shifts from January 2002 to December 2003, to assess proper operation and effectiveness of the fire brigade command post portable radio communications during fire drills and identify any history of operational or performance problems with radio communications during fire drills.

b. Findings

No findings of significance were identified.

.06 Emergency Lighting

a. Inspection Scope

The inspectors reviewed the design, placement, operation, and periodic testing procedures for direct current (DC) self-contained battery powered emergency lighting units (ELU) and dedicated, battery powered portable ELUs. The inspectors evaluated the capability of the ELUs to support plant personnel in the performance of SSD functions, including local manual operator actions, and for illuminating access and egress routes to the areas where those manual actions would be performed. The inspectors checked that these battery power supplies were rated with at least an 8-hour capacity, as required by BTP CMEB 9.5-1, Section C.5.g (1). In plant areas where operators perform local manual actions, the inspectors inspected area ELUs for proper operation and checked the aiming of lamp heads to determine if sufficient illumination would be available to adequately illuminate the SSD equipment, the equipment identification tags, and the access and egress routes thereto. The inspectors also reviewed completed surveillance and maintenance procedures and test records to ensure that the licensee properly maintained the lighting equipment.

The inspectors observed whether emergency exit lighting was provided for personnel evacuation pathways to the outside exits as identified in the National Fire Protection Association (NFPA) 101, Life Safety Code, and the Occupational Safety and Health Administration (OSHA) Part 1910, Occupational Safety and Health Standards. This review also included examination of whether backup emergency lighting was provided for the primary and secondary fire emergency equipment storage locker locations and dress-out areas in support of fire brigade operations should power fail during a fire emergency.

b. Findings

No findings of significance were identified.

.07 Cold Shutdown Repairs

a. Inspection Scope

The team considered whether any repairs may be needed to achieve cold shutdown associated with the fire areas selected (i.e., FZs 38, 42B, and 73). This review was accomplished by reviewing the list of cold shutdown repair procedures and the list of shutdown related cables and their associated equipment known to be in the selected fire zones.

b. Findings

No findings of significance were identified.

.08 Fire Barriers and Fire Area/Zone/Room Penetration Seals

a. Inspection Scope

The inspectors reviewed the selected fire areas/zones to evaluate the adequacy of the fire resistance of fire areas/zones barrier enclosure walls, ceilings, floors, fire barrier mechanical and electrical penetration seals, fire doors, fire dampers, and electrical raceway fire barrier systems. The review was performed to ensure that at least one train of safe shutdown equipment was free of fire damage. This was accomplished by observing the material condition and configuration of the installed fire barrier features, as well as reviewing construction details and supporting fire endurance tests for the installed fire barrier features, to verify that the as-built configurations were qualified by appropriate fire endurance tests. The inspectors also reviewed selected fire seals identified in the plant against supporting fire tests to ensure the installed seals were bounded by tested configurations and that fire barrier installations met licensing basis commitments. The inspectors also reviewed the FHA to verify the fire loading used by the licensee to determine the fire resistance rating of the fire barrier enclosures. The fire protection features included in the review are listed in the attachment.

b. Findings

No findings of significance were identified.

.09 Fire Protection Systems, Features and Equipment

a. Inspection Scope

The inspectors reviewed safe shutdown calculations, vendor documentation, flow diagrams, cable routing information, system operating instructions, operational valve lineup procedures, and system availability studies associated with the fire pumps and fire protection water supply system. Using operating and test procedures, the inspectors toured selected fire pumps and portions of the fire main piping system to evaluate material condition, consistency of as-built configurations with engineering drawings, and to verify correct system breaker and valve lineups. The inspectors evaluated the common fire protection water delivery and supply components to assess if they could be damaged or inhibited by fire-induced failures of electrical power supplies or control circuits. In addition, the inspectors reviewed periodic surveillance and operability flow test data for the fire pumps and fire main loop to assess whether the test program was sufficient to validate proper operation of the fire protection water supply system in accordance with those design requirements and acceptance criteria specified in procedure 92040-C, "Fire Protection Operability and LCO Requirements," and the UFSAR.

For the selected fire areas/zones, the inspectors reviewed the adequacy of the design, installation, and operation of the automatic detection and alarm system to actuate in the early stage of a fire. The review included walk downs of the systems and an examination of the types of detectors, detector spacing, the licensee's technical evaluation of the detector locations, and the ceiling, steel beam reinforcing plans to assess whether the areas were protected by fire detectors in accordance with the Code of Record requirements (National Fire Protection Association 72E, 1982). The inspectors also reviewed the licensee's submittals and associated NRC SERs for the selected fire areas/zones to ensure that the fire detection systems for the selected fire areas were installed in accordance with the design and licensing bases of the plant. Additionally, the inspectors reviewed fire detection surveillance procedures and the detection system technical requirements specified in Procedure 92040-C to determine the adequacy of fire detection component testing to ensure that the detection systems could function when needed.

The inspectors reviewed engineering drawings for the automatic fire suppression systems to assess the adequacy of the design and installations in the Control Building (Level B, FZ 73) and Auxiliary Building (Level A, FZ 38). The inspectors walked down the areas to observe the placement and spacing of sprinkler heads and to confirm they were not obstructed. Design calculations were reviewed to verify that the required fire hose water flow and sprinkler system density for these areas was available. In addition, the inspectors reviewed a sample of electrical schematics and cable routing information for automatic fire suppression equipment to assess the potential effects of fire-induced spurious system operation or malfunction on safe shutdown manual operator actions in adjacent plant areas.

The inspectors reviewed the manual suppression standpipe and fire hose system to verify adequate design, installation, and operation in the selected fire areas/zones. The inspectors examined flow measurement/pressure test data to verify that sufficient pressure and flow volume was available to produce electrically safe and effective fire hose operation within the nozzle manufacturer's specified flow range. During plant tours, the inspectors observed placement of the fire hoses and extinguishers to verify they were not blocked and were consistent with the fire fighting pre-plan drawings and fire protection program documents. Additionally, the inspectors checked a sample of fire hose lengths to confirm they could reach the affected fire areas/zones in support of manual fire fighting efforts.

b. Findings

No findings of significance were identified.

.10 Compensatory Measures

a. Inspection Scope

The inspectors reviewed the administrative controls for out-of-service, degraded, and/or inoperable, fire protection features. The inspectors reviewed selected active items on the fire protection "LCO tracking log" and compared them with the fire areas selected for inspection. The compensatory measures that had been established in these areas were compared to those specified in procedure 92040-C to verify that the risk associated with removing fire protection from service was properly assessed and adequate compensatory measures were implemented in accordance with the approved fire protection program. Additionally, the inspectors reviewed the adequacy of the licensee's short term compensatory measures for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings of significance were identified.

.11 Fire Protection Licensing Basis

a. Inspection Scope

The team reviewed licensing basis documents, including: 10 CFR 50.48; BTP CMEB 9.5-1; Operating License Condition 2.G; the UFSAR; and fire protection SERs documented in NUREG 1137 and its supplements. Based on the above, the inspectors evaluated and compared the licensee's safe shutdown procedures, and various calculations of record against the licensing basis to measure the adequacy and consistency of the program documentation.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed condition reports resulting from fire, smoke, sparks, arcing, and equipment overheating incidents for the period of July 31, 2001 to July 19, 2004 as well as selected fire brigade response, emergency / incidents, and fire safety inspection reports. This review was conducted to assess the frequency of fire incidents and effectiveness of the fire prevention program and any maintenance-related or material condition problems related to fire incidents. The inspectors also reviewed other corrective action program documents, including completed corrective actions documented in selected CRs, and operating experience program (OEP) documents to verify that industry-identified fire protection problems potentially or actually affecting VEGP were appropriately entered into, and resolved by, the corrective action program process. Items included in the OEP effectiveness review were NRC Information Notices, industry or vendor-generated reports of defects and noncompliance under 10 CFR Part 21, and vendor information letters. In addition, the inspectors reviewed a sample of the fire protection program audits and self-assessments which the licensee performed in the previous two-year period. The inspectors evaluated the effectiveness of the corrective actions for the identified issues. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On August 26, 2004, the lead inspector presented the inspection results to Mr. W. Kitchens and other members of his staff who acknowledged the findings. The licensee confirmed that proprietary information was not provided or examined during the inspection. Following completion of additional review in the Region II office, a final exit was held by telephone with Mr. K. Holmes on September 20, 2004, to provide an update on changes to the preliminary inspection findings. The licensee acknowledged the findings.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:

J. Dillon, Performance Analysis Engineer
S. Douglas, Manager Operations
K. Holmes, Performance Analysis Supervisor
W. Kitchens, Nuclear Plant General Manager
J. Lattner, Fire Protection Engineer
B. Lewis, Plant Instructor
K. Lowery, Senior Licensing Engineer
L. Rains, Fire Protection System Engineer
R. Reddy, Senior Engineer
J. Robinson, Unit Superintendent Operations
J. Seay, Senior Engineer
G. Senicz, Senior Engineer
T. Tidwell, Engineering Supervisor

Other licensee employees contacted included office support, operations, engineering, maintenance, radiation, and corporate personnel.

NRC personnel:

G. McCoy, Senior Resident Inspector
T. Morrissey, Resident Inspector
W. Rodgers, Senior Risk Analyst, Region II

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000425/2004007-001	NCV	Inadequate Fire Protection Pre-fire Plan to Ensure Adequate Environmental Conditions for Operators to Access Required Equipment (Section 1R05.02).
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Discussed

None

LIST OF COMPONENTS INSPECTED

Section 1R05.01: Post-fire Safe Shutdown Systems and Section 1R05.03: Post-fire Safe Shutdown Circuit Analysis

<u>Drawings</u>	<u>Description</u>
1X3D-BD-C02F, Rev 9	Elementary Diagram for 1LV-0112B (VCT outlet valve)
1X3D-BD-C02H, Rev 11	Elementary Diagram for 1LV-0112D (RWST outlet valve)
2X3D-BD-C02F, Rev 5	Elementary Diagram for 2LV-0112B (VCT outlet valve)
2X3D-BD-C02H, Rev 5	Elementary Diagram for 2LV-0112D (RWST outlet valve)
1X3D-BD-C04L, Rev 6	Elementary Diagram for 1HV-8103A (RCP seal injection valve)
1X3D-BD-C04H, Rev 5	Elementary Diagram for 1HV-8103B (RCP seal injection valve)
1X3D-BD-C04J, Rev 6	Elementary Diagram for 1HV-8103C (RCP seal injection valve)
1X3D-BD-C04U, Rev 5	Elementary Diagram for 1HV-8103D (RCP seal injection valve)
2X3D-BD-C04L, Rev 6	Elementary Diagram for 2HV-8103A (RCP seal injection valve)
2X3D-BD-C04H, Rev 4	Elementary Diagram for 2HV-8103B (RCP seal injection valve)
2X3D-BD-C04J, Rev 4	Elementary Diagram for 2HV-8103C (RCP seal injection valve)
2X3D-BD-C04U, Rev 4	Elementary Diagram for 2HV-8103D (RCP seal injection valve)
1X3D-BD-L03H, Rev 8	Elementary Diagram for 1HV-1978 (ACCS to RCP thermal barrier valve)
1X3D-BD-L03J, Rev 7	Elementary Diagram for 1HV-1979 (ACCS to RCP thermal barrier valve)
2X3D-BD-L03H, Rev 4	Elementary Diagram for 2HV-1978 (ACCS to RCP thermal barrier valve)
2X3D-BD-L03J, Rev 4	Elementary Diagram for 2HV-1979 (ACCS to RCP thermal barrier valve)
2X3D-BD-C05G, Rev 2	Elementary Diagram for 2HV-8095A & 8096A (Reactor head vent isolation valve)
2X3D-BD-C05H Rev 5	Elementary Diagram for 2HV-0442A (Reactor head vent modulation valve)

Section 1R05.08: Fire Barriers and Penetration Seals

<u>Fire Wall Identification</u>	<u>Description</u>
Removable Dry-stacked Block Wall	Fire Zone 38, Unit 1 Auxiliary Building Level A, Room RA-50 to Room RA-07
Embedded Safe Shutdown Conduits	Fire Zone 38, Unit 1 Auxiliary Building Level A, Room RA-50 to Room RA-07
<u>Fire Door Identification</u>	<u>Description</u>
12108L1A17	Fire Zone 38, Unit 1 Auxiliary Building Level A, Held-open Fire Door to Unit 1 Room RA-24
12108L1A19	Fire Zone 38, Unit 1 Auxiliary Building Level A, Fire Door to Stairway #3

12108L1A43	Fire Zone 38, Unit 1 Auxiliary Building Level A, Fire Door to Unit 1 Room RA-51
12108L1A46	Fire Zone 38, Unit 1 Auxiliary Building Level A, Fire Door to Stairway #1
12108L1A53	Fire Zone 38, Unit 1 Auxiliary Building Level A, Fire Door to Unit 2 Room RA-89
12111L1B98	Fire Zone 42B, Unit 1 Control Building Level B, Airtight and Fire Door to Room RB-70
22111L1B07	Fire Zone 73, Unit 2 Control Building Level B, Fire Door Room RB-04 to Room RB-06
22111L1B10	Fire Zone 73, Unit 2 Control Building Level B, Fire Door Room RB-07 to Room RB-08
22111L1B26	Fire Zone 73, Unit 2 Control Building Level B, Fire Door Room RB-06 to Room RB-21
22111L1B32	Fire Zone 73, Unit 2 Control Building Level B, Fire Door Room RB-06 to Room RB-33

Fire Damper Identification

Description

A-1532-315	Fire Zone 73, Unit 2 Control Building Level B, Room RB-06 to Room RB-33
A-1532-316	Fire Zone 73, Unit 2 Control Building Level B, Room RB-06 to Room RB-33
A-1533-314	Fire Zone 73, Unit 2 Control Building Level B, Room RB-06 to Room RB-33
A-1532-351	Fire Zone 69, Unit 2 Control Building Level B, Room RB-07 to Room RB-08

Fire Barrier Penetration Seal Identification

Description

V12108Z1097A	Fire Zone 38, Unit 1 Auxiliary Building Level A, Seal to Unit 1 Room RA-51
V12108Z1089A	Fire Zone 38, Unit 1 Auxiliary Building Level A, Seal Room RA51 to Room RA-52
V12111Z11526A	Fire Zone 42B, Unit 1 Control Building Level A, Seal to Room RA-70
V12111Z11527A	Fire Zone 42B, Unit 1 Control Building Level A, Seal to Room RA-70
V22111Z1009B	Fire Zone 73, Unit 2 Control Building Level B, Seal Room RB-06 to Room RB-04
V22111Z1012B	Fire Zone 73, Unit 2 Control Building Level B, Seal Room RB-06 to Room RB-04
V22111Z1026B	Fire Zone 69, Unit 2 Control Building Level B, Seal Room RB-07 to Room RB-08
V22111Z1472B	Fire Zone 73, Unit 2 Control Building Level B, Seal Room RB-06 to Room RB-33

Electrical Raceway Fire Barrier Systems

Description

Gypsum Wallboard Enclosure

Fire Zone 80, Unit 2 Control Building Level
B, ERFBS in Room RB-33 For Raceway
2BE350TLAM

LIST OF DOCUMENTS REVIEWED

Procedures

00056-C, 10 CFR50.59 Screenings and Evaluations, Rev. 21.1
 00253-C, Smoking, Eating, and Drinking Policy, Rev. 11.1
 00400-C, Plant Design Control, Rev. 36
 00705-C, Fire Protection Training Program, Rev. 13
 13302-1, Control Building ESF Ventilation System, Rev. 10.1
 14958-C, Fire Brigade Equipment Monthly Inspection, Rev. 15
 14961-C, Emergency Lighting Surveillance, Rev. 33
 17103A-C, Annunciator Response Procedures For Fire Alarm Computer, Rev. 15.1
 17103B-C, Annunciator Response Procedures For Fire Alarm Computer, Rev. 4
 19000-C, E-0 Reactor Trip or Safety Injection, Rev. 29
 19001-C, ES-0.1 Reactor Trip Response, Rev. 25.2
 29219-1, Fire and Smoke Detection Operational Test 1-1813-Q3-F19, Rev. 6
 92000-C, Fire Protection Program, Rev. 19.2
 92005-C, Fire Response Procedure, Rev. 20
 92010-C, Monthly Fire Inspection, Rev. 20.2
 92015-C, Use, Control, and Storage of Flammable/Combustible Materials, Rev. 26
 92027-C, Fire Watch Program, Rev. 15
 92030-C, Fire Drill Program, Rev. 12.1
 92040-C, Fire Protection Operability and LCO Requirements, Rev. 25
 92773-2, Zone 73 - Unit 2 Control Building - Level B Fire Fighting Preplan, Rev. 0.1
 92738-1, Zone 38 - Auxiliary Building - Level A Fire Fighting Preplan, Rev. 5
 92742B-1, Zone 42B - Control Building and Fuel Handling Building Electrical Tunnel and Electrical Shaft - Level C, B, and A Fire Fighting Preplan, Rev. 1.1

Drawings

AX1AG11-00075, Fire, Air & Water Seal, Silicone Foam, Floor/Wall, Rev.2
 AX1AG11-00123, Fire, Air & Water Seal, Elastomer, Floor/Wall, Rev.1
 AX1D11A15, Control Building Door Schedule, Rev. 14
 AX1D11A16, Control Building Door Schedule, Rev. 6
 AX1D11A27, Auxiliary Building Door Schedule, Rev. 10
 AX4DB176, Piping and Instrumentation Diagram (P&ID) Auxiliary Gas Systems, Rev. 19
 AX4DJ2106- Series, Control Bldg. HVAC Plan, Area 2A, Rev. 17
 AX4DJ2107- Series, Control Bldg. HVAC Plan, Area 2B, Rev. 20
 AX4DJ8015, Fire Areas, Auxiliary Building, Level A, Rev. 8
 AX4DJ8023, Fire Areas, Control Building, Level B, Rev. 10
 AX4DJ8025, Fire Areas, Control Building, El. 200'-0, Level A, Rev. 10
 AX4DJ8024- Series, Control Bldg. Fire Area Plans, Level A, Rev. 5
 CX5DT1101-64B, Instrument Set Point List, X4AS01, Rev. 3
 1X1D11H007, Control Building Penetration Seal, Level B, Rev.12
 1X1D11H010, Control Building Penetration Seal, Level A, Rev.9
 1X1D11J032, Control Building Penetration Seal, Level A, North Elevation, Rev.8
 1X3DJ013-A, Fire Detection Plan for Unit 1 Auxiliary Building Level A, Rev. 4

1X4AX03-05350, Fire Protection Sprinkler System, Unit 1, Auxiliary Building Level A, Rev.3
 2X1D11J018, Control Building Penetration Seal, Level B, Rev.5
 2X1D11J021, Control Building Penetration Seal, Level B, Rev.4
 2X3DJ101-A, Fire Detection Plan for Unit 2 Control Building Level B, Rev. 3
 2X3DG361, Control Building Lighting and Communications, Plan El. 180'-0" Level B, Rev.8
 2X4DJ2103, Control Building HVAC Duct Layout, Plan Area 2A & 2D, El. 180'-0" - 200'-0"
 Level B, Rev. 18
 2X4DJ2103-1, Control Building HVAC Duct Layout, Plan Area 2A & 2E, El. 180'-0" - 200'-0"
 Level B, Rev.0
 2X4DJ2116-1, Control Building HVAC Duct Layout, Plan Area 2D & 2E, El. 180'-0" - 200'-0"
 Level B, Rev.14
 2X4DF2A207, Fire Protection Sprinkler System, Unit 2, Control Building Level B, Rev.3
 2X3DJ101-A, Fire Detection Plan for Control Building Level B, Unit 2, Rev. 3
 2X3DJ101-C, Fire Detection Plan for Control Building Level B, Unit 2, Rev. 2
 1X4DB208, Piping and Instrumentation Diagram (P&ID) Auxiliary Building Ventilation System,
 Rev. 11
 2X4DB210, P&ID Control Bldg. Normal HVAC System, Rev. 9
 1/2X4DB174- Series, P&ID - Fire Protection -Water System No. 2301, Rev. 18
 2X4DB210, P&ID - Control Building Normal HVAC System No. 1533, Rev. 9
 1X4DB138-1, P&ID Auxiliary Component Cooling Water System, Rev. 29
 1X4DB138-2, P&ID Auxiliary Component Cooling Water System, Rev. 18
 2X4DB111, P&ID Chemical & Volume Control System, Rev. 24
 2X4DB112, P&ID Chemical & Volume Control System, Rev. 36
 2X4DB114, P&ID Chemical & Volume Control System, Rev. 34
 1X3DF413, Conduit and Tray Plan Area 41 EL. 170'-6" Level B Auxiliary Building, Rev. 21
 1X3DF414, Conduit and Tray Plan Area 1 EL. 1195'-0" Level A Auxiliary Building, Rev. 23
 Westinghouse Drawing 7243D07, Functional Diagram Steam Generator Trip Signals, Rev. 6
 1X3D-AA-E17A, One Line Diagram 480 V Switchgear 1BB16, Rev.6
 1X3D-AA-D03A, One Line Diagram 4160 V Switchgear 1BA03, Rev.11
 1X3D-AA-D03B, One Line Diagram 4160 V Switchgear 1BA03, Rev.12
 1X3D-AA-A01A, Main One Line Unit 1, Rev.24
 1X3D-AA-M01B, Simplified One Line Diagram Fire Event Safe Shutdown Loads Train B, Rev.9
 1X5DV041, Instrument Loop Diagram Main Steam Atmosphere Relief Loop 1, Rev. 7
 Westinghouse Drawing 1D65846, Sheets 6, Interconnecting Wiring Diagram Main Steam
 Atmospheric Relief Valve, Rev. 8
 Westinghouse Drawing 1D65846, Sheets 7, Interconnecting Wiring Diagram Main Steam
 Atmospheric Relief Valve, Rev. 5
 1X3D-BC-Q03Q, Elementary Diagram Main Steam System 1PV-3000 & 1PV-3030, Rev. 9
 1X3D-BC-Q03R, Elementary Diagram Main Steam System 1PV-3010 & 1PV-3020, Rev. 12
 2X3D-BC-Q03Q, Elementary Diagram Main Steam System 2PV-3000 & 2PV-3030, Rev. 7
 2X3D-BC-Q03R, Elementary Diagram Main Steam System 2PV-3010 & 2PV-3020, Rev. 9
 1X3D-AA-B04D, Three Line Diagram Unit 1 Reserve Aux Transformers 1NXRA, 1NXRB, Rev 8
 1X3D-AA-M08A-16, Unit 1 Relaying Data [includes relay 151NRB], Rev. 1
 1X3D-AA-M08A-39, Unit 1 Relaying Data [includes relay 151G at 1BA03 incoming], Rev. 1
 1X3D-AA-M08A-42, Unit 1 Relaying Data [includes relay 150/151GF at 1BA03 compt.18]

Completed Surveillance Procedures and Test Records

1110153A-85032-C, Penetration Seal Inspection, Fire Zone 42B, completed 07/29/99
 14956-301-122987, 3-Year Fire Suppression System Flow Verification, completed 02/22/02
 29140-101-135966, 6-Month Smoke-Check Automatic Fire Door Inspection, completed 06/27/04
 29219-101-140007, Fire and Smoke Detection Operational Test, completed 12/30/03
 29221-202-136197, Fire and Smoke Detection Operational Test, completed 10/30/03
 29212-101-140002, Fire and Smoke Detection Operational Test, completed 02/05/04
 23202-C, Relay Calibration for 151NRB, performed on 10/2/03
 23214-C, Relay Calibration for 1BA0301-151G, performed on 10/7/03
 23214-C, Relay Calibration for 1BA0318-150/151GF, performed on 10/1/03

Design Calculations

X4C2301SO47, Fire Safe Shutdown Evaluation of Embedded Conduits for Unit 2, Rev. 3
 X4C2301SO48, Fire Safe Shutdown Evaluation of Embedded Conduits for Unit 1, Rev. 0
 X4C2301S051, Unit 1 Fire Zone Combustible Loading Calculation, Rev. 1
 X4C2301S052, Unit 2 Fire Zone Combustible Loading Calculation, Rev. 1
 X4C2301S296, Adequacy of 200' Backup Fire Hose, Rev. 0
 X4C2301S303, Most Remote Hose Station Pressure Calculations for Vogtle Unit 2, Rev. 0
 X4C2301S305, Hydraulic Calculations for FP Underground Flow Tests, Rev. 0
 X6CXC-27, Flooding Analysis, Auxiliary Building, Level D, Rev. 8
 X6CXC-33, Flooding Analysis, Control Building, Level B, Rev. 7
 X4C2301S026, Fire Event Safe Shutdown Evaluation Control Building Unit 1, Rev. 9
 X4C2301S033, Fire Event Safe Shutdown Evaluation Control Building Unit 2, Rev. 11
 X4C2301S025, Fire Event Safe Shutdown Evaluation Auxiliary Building Unit 1, Rev. 5
 X3CT08, Fire Event Safe Shutdown Circuit Analysis, Sheet 42, 4.16 kV Ground Fault Coordination RAT Low Side and Bus 1BA03

Engineering Changes

DCP 94-V2N0062, Deletion of Thermo-Lag As A Fire Barrier, 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

OSHA Standard 29 CFR 1910, Occupational Safety and Health Standards

Underwriters Laboratory (UL) Standard 401, Standard for Portable Spray Hose Nozzles for Fire Protection Service, dated 08/27/93

UL Standard 555, Standard for Fire Dampers and Ceiling Dampers, dated 05/14/79

Technical Manuals and Vendor Information

AFH-01-Redskin, Angus Industrial Fire Hose Specifications, Rev. 1987

PN 088-15093, Ventilator User Guide - P200SE, Rev. 08/28/98

Material Safety Data Sheet, Fire Aide 2000 - Fire Fighting Agent, Rev. 09/04/01

Friction Loss Data for Angus Rubber Covered Fire Hose, Rev. 01/11/02

Elkhart Brass, Model L-205-EB, Industrial Non-Shock Fog Nozzle Specification and Flow Data, Rev. 12/17/03

Rixson-Firemark Door Controls, Smoke-Check Electro-mechanical Door Holder/Closer With Smoke Detector, Rev. 07/02

Underwriters Laboratory, UROX2.S2002, Smoke-automatic Fire Detectors - Components Guide, Rev. S2002

80041-LHY, Air Products, Equipment Specifications and Spare Parts, Excess Flow Control Station, Rev. 10/87

Audits, and Self Assessments

Maintenance Fire Protection Self Assessment, NOM-02250, June 3, 2002

Safety Audit and Engineering Review Audit of Fire Protection Program - Annual & Biennial, VSAER-2002-062, July 9, 2002

Quality Assurance Annual Audit of Fire Protection Program, VQA-2003-071, August 25, 2003

Fire Protection Program Focused Self Assessment, Storage of Flammable/Combustible Materials, June 4, 2004

License Basis Documents

VEGP-FSAR-9.5.1, Fire Protection Program, Rev. 7

VEGP-FSAR-9.5.1, Appendix 9A, Fire Hazards Analysis, Rev. 5

VEGP-FSAR-9.5.1, Appendix 9B, Comparison of VEGP Units 1 and 2 with Requirements of the BTP CMEB 9.5-1, Rev. 10

VEGP-FSAR-9.5.2, Communications Systems, Rev. 9

Other Documents

Corrective action program condition reporting system (CRs) resulting from fire, smoke, sparks, arcing, and equipment overheating incidents for the period July 31, 2001 to July 19, 2004

Fire Brigade Drill Critique Reports for Brigade Shifts from January 2002 to December 2003

Fire Protection LCO Tracking Log January 2003 to June 2004

Minimum Shift Manning, Data Sheet 1, dated 08/12/04

NRC Information Notice 2000-12, Potential Degradation of Firefighter Primary Protective Garments, dated September 21, 2000
 NRC Information Notice 2003-08, Potential Flooding through Unsealed Concrete Floor Cracks, dated June 25, 2003
 PDMS Cable Routing Sheet for Radio Repeater Power Supply (ANYC225SA)
 PDMS Cable Routing Sheet for Fire Protection Valve 1HV-27930 (1CA1NBK38LA)
 PDMS Cable Routing Sheet for Fire Protection Valve 2HV-27930 (2CA2NBK38LA)
 Transient Combustible Permits issued for 90 day period from March 2004
 U. S. Consumer Product Safety Commission, Invensys Building Systems Announce Recall of Siebe Actuators in Building Fire/Smoke Dampers, dated October 2, 2002

Condition Reports (CR) and Action Items Reviewed During Inspection

CR 2001001510, Flood Analysis Results not Translated into SSD Procedures or Pre-Fire Plans
 CR 2001001522, Flood Analysis Calculation Discrepancies
 CR 2002000686, Fire Retardant Wood Used for Shoring Started to Burn
 CR 2002003206, Fire in Transformer Caused Loss of Distribution Panel
 CR 2003001208, Smoke From Breaker Cubical After Closing Breaker
 CR 2003002291, Smoke and Fire From Windings of Blower "A" After Being Placed in Service
 CR 2003002814, Bus Connector Strap Shows Signs of Being Overheated
 Action Item 2001201092, SNC-Corporate Review of VEGP Flooding Analysis In Light Of Operator Actions Required For Fire Event Safe Shutdown

Condition Reports (CR) Generated as a Result of Inspection Activities

CR 2004000376	CR 2004003381	CR 2004000378	CR 2004003382
CR 2004003145	CR 2004003416	CR 2004003155	CR 2004003482
CR 2004003156	CR 2004003494	CR 2004003161	CR 2004003556
CR 2004003256	CR 2004003558	CR 2004003351	CR 2004003560
CR 2004003364	CR 2004003573	CR 2004003365	CR 2004003668
CR 2004003497			

LIST OF ACRONYMS

ADAMS	Agency-Wide Documents Access and Management System
ACCS	auxiliary component cooling water system
CFR	Code of Federal Regulations
CR	condition report
DC	direct current
ELU	emergency lighting unit
FHA	Fire Hazards Analysis
ft	foot
FPP	Fire Protection Program
FZ	Fire Zone
HVAC	heating, ventilation, and air conditioning
IPEEE	Individual Plant Examination for External Events
LCO	limiting condition for operation
MCR	main control room
NCV	non-cited violation
NFPA	National Fire Protection Association
NRC	U. S. Nuclear Regulatory Commission
OEP	operating experience program
OSHA	Occupational Safety and Health Administration
PARS	Publicly Available Records Systems
P&ID	pipng and instrumentation diagram
RAT	reserve auxiliary transformer
RCP	reactor coolant pump
RCS	reactor coolant system
RWST	refueling water storage tank
SDP	Significance Determination Process
SER	safety evaluation report
SSA	safe shutdown analysis
SSD	safe shutdown
UFSAR	Updated Final Safety Analysis Report
UL	Underwriter's Laboratory
V	volt
VCT	volume control tank