



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

May 13, 2011

Mr. R. M. Krich
Vice President, Nuclear Licensing
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

**SUBJECT: SEQUOYAH NUCLEAR PLANT – NRC TEMPORARY INSTRUCTION 2515/183
INSPECTION REPORT 05000327/2011010, 05000328/2011010**

Dear Mr. Krich:

On April 29, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Sequoyah Nuclear Plant, Units 1 and 2, using Temporary Instruction 2515/183, "Follow-up to the Fukushima Daiichi Nuclear Station Fuel Damage Event." The enclosed inspection report documents the inspection results which were discussed on May 9, 2011, with Mr. M. Skaggs and other members of your staff.

The objective of this inspection was to promptly assess the capabilities of the Sequoyah Nuclear Plant to respond to extraordinary consequences similar to those that have recently occurred at the Japanese Fukushima Daiichi Nuclear Station. The results from this inspection, along with the results from this inspection performed at other operating commercial nuclear plants in the United States will be used to evaluate the U.S. nuclear industry's readiness to safely respond to similar events. These results will also help the NRC to determine if additional regulatory actions are warranted.

All of the potential issues and observations identified by this inspection are contained in this report. The NRC's Reactor Oversight Process will further evaluate any issues to determine if they are regulatory findings or violations. Any resulting findings or violations will be documented by the NRC in a separate report. You are not required to respond to this letter.

TVA

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Eugene F. Guthrie, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-327, 50-328
License Nos.: DPR-77, DPR-79

Enclosure: Inspection Report 05000327/2011010, 05000328/2011010
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made 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), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

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cc w/encl: (See page 3)

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE
 ADAMS: Yes ACCESSION NUMBER: ML111330368 SUNSI REVIEW COMPLETE

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|--------------|------------|------------|------------|--------|--------|--------|--------|
| OFFICE | RII:DRP | RII:DRP | RII:DRP | | | | |
| SIGNATURE | Via email | Via email | EFG /RA/ | | | | |
| NAME | WDeschaine | CYoung | EGuthrie | | | | |
| DATE | 05/13/2011 | 05/13/2011 | 05/13/2011 | | | | |
| E-MAIL COPY? | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO |

TVA

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cc w/encl:
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Sequoyah Nuclear Plant
Tennessee Valley Authority
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401 Church Street
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TVA

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Letter to R. M. Krich from Eugene Guthrie dated May 13, 2011

SUBJECT: SEQUOYAH NUCLEAR PLANT – NRC TEMPORARY INSTRUCTION 2515/183
INSPECTION REPORT 05000327/2011010, 05000328/2011010

Distribution w/encl:

C. Evans, RII

L. Douglas, RII

OE Mail

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-327, 50-328

License Nos.: DPR-77, DPR-79

Report Nos.: 05000327/2011010, 05000328/2011010

Licensee: Tennessee Valley Authority (TVA)

Facility: Sequoyah Nuclear Plant, Units 1 and 2

Location: Sequoyah Access Road
Soddy-Daisy, TN 37379

Dates: March 23 – April 29, 2011

Inspectors: C. Young, Senior Resident Inspector
W. Deschaine, Resident Inspector

Approved by: Eugene F. Guthrie, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000327/2011010, 05000328/2011010, 03/23/2011 – 04/29/2011; Sequoyah Nuclear Plant, Units 1 and 2; Temporary Instruction 2515/183 – Follow-up to the Fukushima Daiichi Nuclear Station Fuel Damage Event.

This report covers an announced Temporary Instruction inspection. The inspection was conducted by Resident and Region II inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006."

INSPECTION SCOPE

The intent of the TI is to provide a broad overview of the industry's preparedness for events that may exceed the current design basis for a plant. The focus of the TI was on (1) assessing the licensee's capability to mitigate consequences from large fires or explosions on site, (2) assessing the licensee's capability to mitigate station blackout (SBO) conditions, (3) assessing the licensee's capability to mitigate internal and external flooding events accounted for by the station's design, and (4) assessing the thoroughness of the licensee's walk downs and inspections of important equipment needed to mitigate fire and flood events to identify the potential that the equipment's function could be lost during seismic events possible for the site. If necessary, a more specific follow-up inspection will be performed at a later date.

INSPECTION RESULTS

All of the potential issues and observations identified by this inspection are contained in this report. The NRC's Reactor Oversight Process will further evaluate any issues to determine if they are regulatory findings or violations. Any resulting findings or violations will be documented by the NRC in a separate report.

Enclosure

03.01 Assess the licensee's capability to mitigate conditions that result from beyond design basis events, typically bounded by security threats, committed to as part of NRC Security Order Section B.5.b issued February 25, 2002, and severe accident management guidelines and as required by Title 10 of the Code of Federal Regulations (10 CFR) 50.54(hh). Use Inspection Procedure (IP) 71111.05T, "Fire Protection (Triennial)," Section 02.03 and 03.03 as a guideline. If IP 71111.05T was recently performed at the facility the inspector should review the inspection results and findings to identify any other potential areas of inspection. Particular emphasis should be placed on strategies related to the spent fuel pool. The inspection should include, but not be limited to, an assessment of any licensee actions to:

| Licensee Action | Describe what the licensee did to test or inspect equipment. |
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| <p>a. Verify through test or inspection that equipment is available and functional. Active equipment shall be tested and passive equipment shall be walked down and inspected. It is not expected that permanently installed equipment that is tested under an existing regulatory testing program be retested.</p> <p>This review should be done for a reasonable sample of mitigating strategies/equipment.</p> | <p>Licensee actions included the identification of equipment (active and passive) utilized for implementation of B.5.b actions and any additional equipment used in Severe Accident Management Guidelines (SAMGs). The licensee had a preventive maintenance program for B.5.b equipment which provided comprehensive testing and inspection for all equipment necessary to implement B.5.b strategies. The licensee's actions included a review of the scope of these programs, as well as verification of the performance of these procedures. The licensee performed testing of all active B.5.b and SAMG equipment and walkdowns of all passive B.5.b and SAMG equipment which had not has PMs performed within the last ninety days.</p> |
| | <p>Describe inspector actions taken to confirm equipment readiness (e.g., observed a test, reviewed test results, discussed actions, reviewed records, etc.).</p> |
| | <p>The licensee's actions as discussed above were completed prior to the issuance of NRC TI 2515/183. The inspectors assessed the licensee's capabilities by conducting a review of the licensee's walkdown and review activities. In addition, the inspectors independently walked down and inspected a sample of major B.5.b and SAMG contingency response equipment staged throughout the site. The results of the inspectors' independent walkdowns confirmed the results obtained by the licensee. In addition, an NRC triennial fire protection inspection team performed the applicable portions of IP 71111.05T to selected B.5.b strategies during a recent inspection in February 2011. This included evaluating the adequacy and readiness of applicable equipment.</p> |

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| | <p>Discuss general results including corrective actions by licensee.</p> <p>All equipment (active and passive) designated for B.5.b and SAMG use was verified by the licensee to be staged and addressed by applicable procedures. The licensee concluded that the results of the B.5.b and SAMG equipment scope review and inspections confirmed, in general, an acceptable readiness status of all equipment necessary to implement these strategies/guidelines. One exception was noted, as indicated below.</p> <ul style="list-style-type: none"> • PER 342321: The hydrogen recombiners (two per unit) are not being maintained through the preventive maintenance (PM) program. The 1A recombiner is known to be non-functional. Although the recombiners have been removed from technical specifications and are no longer required for design basis accidents, they are credited as being part of the mitigating strategy for beyond-design-basis accidents. The licensee has issued a work order to perform corrective maintenance to restore the 1A recombiner. The licensee is evaluating the options of scheduling periodic PMs and testing, or possibly abandoning the equipment. |
| <p>Licensee Action</p> | <p>Describe the licensee's actions to verify that procedures are in place and can be executed (e.g. walkdowns, demonstrations, tests, etc.)</p> |
| <p>b. Verify through walkdowns or demonstration that procedures to implement the strategies associated with B.5.b and 10 CFR 50.54(hh) are in place and are executable. Licensees may</p> | <p>The licensee performed a review of all procedures that implement SAMG and B.5.b strategies and mitigating actions, including all 50 EDMG strategies and 30 B.5.b-related strategies. The licensee conducted walkdowns and demonstrations to verify these procedures were in place and executable.</p> <p>Describe inspector actions and the sample strategies reviewed. Assess whether procedures were in place and could be used as intended.</p> |

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| <p>choose not to connect or operate permanently installed equipment during this verification.</p> <p>This review should be done for a reasonable sample of mitigating strategies/equipment.</p> | <p>The inspectors assessed the licensee's capabilities by conducting a review of the licensee's walkdown activities. In addition, a NRC Triennial Fire Protection inspection team selected a B.5.b procedure sample to independently evaluate via a table-top exercise and walkdowns in order to assess adequacy and usability.</p> |
| | <p>Discuss general results including corrective actions by licensee.</p> |
| | <p>Procedures used for B.5.b and SAMG strategies were reviewed by the licensee, and walkdowns were performed by operators to ensure actions taken in the field in response to a B.5.b event could be performed. Some procedure enhancements were identified by the licensee and entered into the CAP. The licensee generated approximately 70 CAP entries to implement enhancements to procedures in this area. The following issue was identified:</p> <ul style="list-style-type: none"> • PER 341732: The licensee's SAMG procedure for injecting into containment (SAG-4) did not provide a workable valve alignment for gravity draining to the containment sump via the containment spray system. <p>The licensee issued a corrective action to evaluate the need for a revision to this procedure.</p> |

| Licensee Action | Describe the licensee's actions and conclusions regarding training and qualifications of operators and support staff. |
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| <p>c. Verify the training and qualifications of operators and the support staff needed to implement the procedures and work instructions are current for activities related to Security Order Section B.5.b and severe accident management guidelines as required by 10 CFR 50.54 (hh).</p> | <p>The training requirements, qualifications, and associated records needed for operators for the implementation of SAMGs and B.5.b event response were reviewed by the licensee. The licensee verified that the qualifications of operators and support staff needed to implement the procedures and work instructions are current for activities related to Security Order Section B.5.b and severe accident management guidelines as required by 10 CFR 50.54 (hh).</p> |
| | <p>Describe inspector actions and the sample strategies reviewed to assess training and qualifications of operators and support staff</p> |
| | <p>The inspectors assessed the licensee's training and qualification activities by conducting an independent review of selected training and qualification materials and records related to B.5.b and SAMG event response. In addition, an NRC triennial fire protection inspection team performed the portions of IP 71111.05T applicable to B.5.b strategies during a recent inspection in February 2011. This included evaluating B.5.b-related training material.</p> |
| | <p>Discuss general results including corrective actions by licensee.</p> |
| | <p>The licensee confirmed that applicable training and qualifications were in place and current, with the exception that 8 current maintenance supervisors had not yet received initial B.5.b training. The licensee issued a corrective action to ensure that this training will be provided. The licensee also identified several possible enhancements to these training programs, and entered these issues in the CAP.</p> |

| Licensee Action | Describe the licensee's actions and conclusions regarding applicable agreements and contracts are in place. |
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| <p>d. Verify that any applicable agreements and contracts are in place and are capable of meeting the conditions needed to mitigate the consequences of these events.</p> <p>This review should be done for a reasonable sample of mitigating strategies/equipment.</p> | <p>Licensee actions included the identification of all applicable contracts and agreements committed to be in place for the mitigation of a B.5.b related event. The licensee verified that the contracts and agreements were current, and documented whether or not the contracts/agreements were capable of meeting the mitigation strategy.</p> |
| | <p>For a sample of mitigating strategies involving contracts or agreements with offsite entities, describe inspector actions to confirm agreements and contracts are in place and current (e.g., confirm that offsite fire assistance agreement is in place and current).</p> |
| | <p>The inspectors assessed the licensee's capabilities by conducting an independent review of the licensee's fire protection services agreement with the Soddy Daisy Fire Department. The inspectors' review of the agreement verified that it was current, and assessed that it was adequate for meeting the licensee's mitigation strategy.</p> |
| | <p>Discuss general results including corrective actions by licensee.</p> |
| | <p>The licensee verified that any applicable agreements (e.g. MOUs and MOAs) are in place and are capable of meeting the conditions needed to mitigate the consequences of these events. The following issue was identified:</p> <ul style="list-style-type: none"> • PER 341722: The licensee's event mitigation procedure (EDMG-2) for restoring ERCW function includes installation of a portable pump to supply the ERCW headers from the station's fire water header. The required pump size/capacity to provide the required flow for this application had not been evaluated. <p>The licensee issued a corrective action to evaluate and revise EDMG-2 as necessary.</p> |

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| Licensee Action | Document the corrective action report number and briefly summarize problems noted by the licensee that have significant potential to prevent the success of any existing mitigating strategy. |
| e. Review any open corrective action documents to assess problems with mitigating strategy implementation identified by the licensee. Assess the impact of the problem on the mitigating capability and the remaining capability that is not impacted. | The inspectors performed a daily review of all licensee CAP entries, including those generated as a result of the licensee's actions in response to the items listed above. The inspectors assessed the potential for any identified conditions to impact mitigating strategy implementation capability. Approximately 77 PERs were generated as a result of the licensee's response efforts to the above items. No significant impacts or vulnerabilities were noted other than those which had already been identified. |

03.02 Assess the licensee's capability to mitigate station blackout (SBO) conditions, as required by 10 CFR 50.63, "Loss of All Alternating Current Power," and station design, is functional and valid. Refer to TI 2515/120, "Inspection of Implementation of Station Blackout Rule Multi-Plant Action Item A-22" as a guideline. It is not intended that TI 2515/120 be completely re-inspected. The inspection should include, but not be limited to, an assessment of any licensee actions to:

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| Licensee Action | Describe the licensee's actions to verify the adequacy of equipment needed to mitigate an SBO event. |
| a. Verify through walkdowns and inspection that all required materials are adequate and properly staged, tested, and maintained. | Licensee actions included the identification of equipment utilized/required for mitigation of a SBO. The licensee conducted walkdowns and inspections of this equipment to ensure they were adequate and properly staged. |
| | Describe inspector actions to verify equipment is available and useable. |
| | The inspectors assessed the licensee's capability to mitigate SBO conditions by conducting a review of the licensee's walkdown activities. In addition, the inspectors selected a sample of equipment utilized/required for mitigation of a SBO and conducted independent walkdowns of that equipment to verify that the equipment was properly aligned and staged. |

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| | <p>Discuss general results including corrective actions by licensee.</p> |
| | <p>No discrepancies were identified as a result of the above activities. All associated equipment was verified to be appropriately staged, available, and functional.</p> |

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| <p>Licensee Action</p> | <p>Describe the licensee's actions to verify the capability to mitigate an SBO event.</p> |
| <p>b. Demonstrate through walkdowns that procedures for response to an SBO are executable.</p> | <p>The licensee identified procedures required for response to a SBO, and conducted reviews and walkdowns to confirm that each procedure is adequate and executable in order to properly implement the licensee's SBO mitigation strategy.</p> |
| | <p>Additionally, the licensee coordinated a simulator scenario to verify the adequacy of the procedures and plant response during an extended SBO. The licensee also conducted three table top scenarios that extended beyond the capability of the simulator.</p> |
| | <p>Describe inspector actions to assess whether procedures were in place and could be used as intended.</p> |
| | <p>The inspectors assessed the licensee's capabilities by conducting a review of the licensee's walkdown activities. In addition, the inspectors selected a sample of the applicable procedures and performed walkdowns to independently verify the procedure's adequacy. Also, the inspectors observed a sample of the table top scenarios that extended beyond the capability of the simulator.</p> |
| | <p>Discuss general results including corrective actions by licensee.</p> |
| | <p>The results of the above walkdowns and reviews showed that the applicable procedures were executable and capable of implementing the appropriate mitigating actions. The licensee generated 10 PERs to evaluate potential procedure enhancements.</p> |

03.03 Assess the licensee’s capability to mitigate internal and external flooding events required by station design. Refer to IP 71111.01, “Adverse Weather Protection,” Section 02.04, “Evaluate Readiness to Cope with External Flooding” as a guideline. The inspection should include, but not be limited to, an assessment of any licensee actions to verify through walkdowns and inspections that all required materials and equipment are adequate and properly staged. These walkdowns and inspections shall include verification that accessible doors, barriers, and penetration seals are functional.

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| <p>Licensee Action</p> | <p>Describe the licensee’s actions to verify the capability to mitigate existing design basis flooding events.</p> |
| <p>a. Verify through walkdowns and inspection that all required materials are adequate and properly staged, tested, and maintained.</p> | <p>The licensee reviewed the mitigation strategies for both internal and external flooding events at the station. This included the identification of active and passive equipment required for design basis flooding mitigation, as well as associated procedures. The licensee conducted walkdowns and inspections to assess the condition of applicable materials and equipment, including reviews of applicable preventive maintenance (PM) programs, as well as the ability of associated procedures to execute required tasks. The licensee also conducted a table top design basis flooding scenario to verify the capability of applicable procedures to implement required actions. The licensee also reviewed open CAP issues as well as open/pending PM activities to identify any issues which could potentially impact flood mitigation equipment.</p> <p>Describe inspector actions to verify equipment is available and useable. Assess whether procedures were in place and could be used as intended.</p> <p>The inspectors assessed the licensee’s capabilities to mitigate flooding by conducting a review of the licensee’s walkdown activities. The inspectors also conducted independent walkdowns of selected flood mitigation equipment and applicable procedures. Licensee flood mitigation procedures were reviewed to verify usability. The inspectors also observed portions of the licensee’s table top exercise scenario. The inspectors’ conclusions aligned with the results obtained by the licensee.</p> |

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| | <p>Discuss general results including corrective actions by licensee.</p> <p>In general, all applicable material, equipment, and procedures were verified to be available and functional. The licensee generated approximately 50 PERs in this area, including several potential procedure enhancements. The following six issues were identified and entered into the CAP, as indicated below.</p> <ul style="list-style-type: none">• PER 340201: Loss of Site Communications during design basis flood event. Corrective action was issued to evaluate communication needs and availability.• PERs 350391: No PM documentation was found for the containment entry doors. Corrective action was issued to add doors to PM scope.• PER 347351: Six station drainage valves required to be operated by the licensee's procedure for design basis flooding preparation could not be located during walkdown. Corrective action was issued to revise the procedure as necessary.• PER 339220: The manpower and timeline analysis associated with stage 1 and 2 flood preparation actions in AOP-N.03 Appendix D appears to be unrealistic. Corrective action was issued to re-evaluate and revise as needed.• PER 342980: Diesel generator fuel oil replenishment connections were located below the probable maximum flood level. Compensatory actions already existed to address flood protection. Corrective action was issued to review the design of the connections.• PER 340456: ERCW traveling water screen instrumentation vent lines represent a previously unrecognized flowpath for water to enter the ERCW pumping station during a design basis flooding event. This condition has since been evaluated to be within the capacity of the installed station sump pump system. |
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03.04 Assess the thoroughness of the licensee’s walkdowns and inspections of important equipment needed to mitigate fire and flood events to identify the potential that the equipment’s function could be lost during seismic events possible for the site. Assess the licensee’s development of any new mitigating strategies for identified vulnerabilities (e.g., entered it in to the corrective action program and any immediate actions taken). As a minimum, the licensee should have performed walkdowns and inspections of important equipment (permanent and temporary) such as storage tanks, plant water intake structures, and fire and flood response equipment; and developed mitigating strategies to cope with the loss of that important function. Use IP 71111.21, “Component Design Basis Inspection,” Appendix 3, “Component Walkdown Considerations,” as a guideline to assess the thoroughness of the licensee’s walkdowns and inspections.

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| <p>Licensee Action</p> | <p>Describe the licensee’s actions to assess the potential impact of seismic events on the availability of equipment used in fire and flooding mitigation strategies.</p> |
| <p>a. Verify through walkdowns that all required materials are adequate and properly staged, tested, and maintained.</p> | <p>The licensee performed walkdowns and inspections of plant equipment important for fire and flood event mitigation, and evaluated the potential impact of a seismic event on the functionality of these sets of equipment. The licensee also inspected the material condition of the equipment as well as the surrounding seismic and non-seismic equipment and structures, including temporary equipment. The licensee also assessed ruggedness and transportability of credited portable equipment.</p> <p>Describe inspector actions to verify equipment is available and useable. Assess whether procedures were in place and could be used as intended.</p> <p>The inspectors performed walkdowns, both independently and in conjunction with licensee personnel, of important equipment needed to mitigate fire and flood events to assess whether the equipment’s function could be affected during a seismic event. The inspectors reviewed a sample of licensee flood and fire mitigation procedures to verify usability. The results of the inspectors’ reviews aligned with the licensee’s conclusions.</p> <p>Discuss general results including corrective actions by licensee. Briefly summarize any new mitigating strategies identified by the licensee as a result of their reviews.</p> |

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| | <p>The licensee initiated approximately 25 PERs to document beyond-design-basis issues which were identified as a result of the above walkdowns and reviews. For the scenario of a fire following a seismic event, identified issues included seismic qualification of ventilation dampers and portions of fire protection piping which are not seismically qualified. For the scenario of a flood following a seismic event, identified vulnerabilities included the impact of a loss of non-safety related control air, the unknown seismic classification of the fire/flood mode pumps and associated piping, the extent to which communications equipment could survive a seismic event, and the evaluation of whether flood doors could withstand a simultaneous SSE and flooding events. It was also identified that some mitigating equipment was stored in non-seismic structures. These issues were entered into the CAP for further evaluation and the development of additional mitigating strategies as needed.</p> |
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4OA6 Meetings

On May 9, 2011, the inspectors presented the inspection results to Mr. M. Skaggs and other members of licensee management. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

S. Connors, Operations Manager
G. Cook, Licensing Manager
R. Detwiler, Director, Safety and Licensing
C. Dieckmann, Maintenance Manager
K. Langdon, Plant Manager
P. Pratt, Assistant to the Operations Manager
P. Simmons, Work Control Manager
M. Skaggs, Site Vice President
R. Thompson, Emergency Preparedness Manager
C. Ware, Training Director
J. Williams, Site Engineering Director
S. Young, Site Security Manager

Nuclear Regulatory Commission

C. Young, Senior Resident Inspector
W. Deschaine, Resident Inspector

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

03.01 Assess the licensee's capability to mitigate conditions that result from beyond design basis events

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|--------------------------------|---|-------------------------|
| Contract Number 50068 | Memo that reaffirms Agreement Letter with Soddy Daisy Fire Department | 5/28/2011 |
| OPL273S1022 | Earthquake, Flooding | 06/02/2010 |
| TRN-34 | Severe Accident Management Training | 5 |
| NPG-SPP-18.3.1 | Severe Accident Management Guideline (SAMG) Program Administration | 0 |
| EPT500.032 | SQN Severe Accident Management Guideline Training or Retraining | 1 |
| EDMG-1 | Loss of MCR/ACR Function - Initial Response | 2 |
| 0-MA-REM-000-001.0 | Extended Station Blackout | 4 |
| OPL271B5b | B5b Event Mitigation | 1 |
| 0-PI-OPS-000-000.0 | Blackout Generator Exercise Run Instructions | 1 |
| EDMG-2 | Event Mitigation | 12 |
| 0-PI-MSC-317-402.0 | Accident Mitigation Actions Inventory of Equipment | 8 |
| SQN-0-DG-245-0001 PM 063602395 | Periodic inspection and maintenance on blackout diesel generators 1 & 2 | 0 |
| 0-PI-FPU-026-001.Q | Periodic Inspection and Operation of the Black Out Diesel Pump | 2 |
| 0-MA-ESC-317-300.4 | Connection of Blackout Diesel Generator to 6.9kV Unit Boards | 0 |
| SAG-4 | Inject Into Containment | 2 |

03.02 Assess the licensee's capability to mitigate station blackout (SBO) conditions

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|--------------------------------|---|-------------------------|
| AOP-P.01 | Loss of Offsite Power | 26 |
| 0-PI-MSC-317-402.0 | Accident Mitigation Actions Inventory of Equipment | 8 |
| SQN-0-DG-245-0001 PM 063602395 | Periodic inspection and maintenance on blackout diesel generators 1 & 2 | 0 |

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| 0-MA-ESC-317-300.4 | Connection of Blackout Diesel Generator to 6.9kV Unit Boards | 0 |
| EA-1-2 | Local Control of S/G PORVs | 2 |
| 0-SI-EBT-250-100.4 | Modified Performance Testing of 125Vdc Vital Batteries and 125Vdc Vital Battery Charger Test | 23 |
| ECA-0.0 | Loss of All AC Power | 23 |
| EA-3-2 | Local Control of Turbine Driven AFW LCVs | 3 |

03.03 Assess the licensee's capability to mitigate internal and external flooding events required by station design

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|--------------------|---------------------------------------|-------------------------|
| AOP-N.03 | Flooding | 32 |
| 0-PI-OPS-510-001.0 | Flood Preparation Equipment Inventory | 8 |

03.04 Assess the thoroughness of the licensee's walkdowns and inspections of important equipment needed to mitigate fire and flood events to identify the potential that the equipment's function could be lost during seismic events

| <u>Number</u> | <u>Description or Title</u> | <u>Date or Revision</u> |
|--------------------|---|-------------------------|
| FSAR Table 9.5.2-1 | COMMUNICATION EQUIPMENT AVAILABILITY TOOL | 22 |
| AOP-N.03 | Flooding | 32 |
| AOP-N.01 | Plant Fires | 31 |

LIST OF ACRONYMS USED

| | |
|-------|---|
| ADAMS | Agencywide Documents Access and Management System |
| CAP | Corrective Action Program |
| CFR | Code of Federal Regulations |
| EDMG | Extensive Damage Mitigation Guideline |
| NRC | United States Nuclear Regulatory Commission |
| PER | Problem Evaluation Report (CAP entry) |
| SSE | Safe Shutdown Earthquake |