



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

May 23, 2012

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Virginia Electric and Power Company  
Dominion Nuclear  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060-6711

**SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 - NOTIFICATION OF TRIENNIAL  
FIRE PROTECTION BASELINE INSPECTION (NRC INSPECTION REPORT  
05000280/2012011 AND 05000281/2012011)**

Dear Heacock:

The purpose of this letter is to notify you that the U.S. Nuclear Regulatory Commission (NRC) Region II staff will conduct a triennial fire protection baseline inspection at the Surry Power Station, Units 1 and 2, in July and August 2012. McKenzie Thomas, Senior Reactor Inspector, will lead the team which will be composed of inspectors from the NRC Region II Office. The inspection will be conducted in accordance with Inspection Procedure 71111.05T, the NRC's triennial fire protection baseline inspection procedure dated October 28, 2011.

The inspection objective will be to evaluate your fire protection program implementation with emphasis on post-fire safe shutdown capability and the fire protection features provided to ensure at least one post-fire safe shutdown success path is maintained free of fire damage. The inspection team will focus their review on the systems and equipment necessary to achieve and maintain safe shutdown and the fire protection features of selected fire areas.

On May 16, 2012, during a telephone conversation between Mr. Barry Garber, Surry Licensing Supervisor, and Mrs. LaDonna Suggs, our respective staffs confirmed arrangements for a three-day information gathering onsite visit and a two-week onsite inspection. The schedule for the inspection is:

- Information gathering visit: July 10 – 12, 2012
- Week 1 of onsite inspection: July 30 – August 3, 2012
- Week 2 of onsite inspection: August 13 – 17, 2012

The purposes of the information gathering visit are to obtain information and documentation needed to support the inspection, and to become familiar with the Surry Power Station fire protection program, fire protection features, post-fire shutdown capabilities and plant layout mitigating strategies to address Section B.5.b of NRC Order EA-02-026, "Order for Interim Safeguards and Security Compensatory Measures," dated February 25, 2002, and Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(hh)(2); and, as necessary, obtain plant-specific site access training and badging for unescorted site access. A list of the types of documents the team may be interested in reviewing, and possibly obtaining, are listed in Enclosures 1 and 2.

Please contact McKenzie Thomas or Rodney Fanner prior to preparing copies of the materials listed in the Enclosure. The inspection team will try to minimize your administrative burden by specifically identifying those documents required for inspection preparation.

During the information gathering visit, the team will also discuss the following administrative details – office space; specific documents to be made available to the team in its office space; arrangements for reactor site access (including radiation protection training, security, safety and fitness for duty requirements); and the availability of knowledgeable plant engineering and licensing organization personnel to serve as points of contact during the inspection.

We request that during the inspection weeks you ensure that copies of analyses, evaluations or documentation regarding the implementation and maintenance of the Surry Power Station fire protection program, including post-fire safe shutdown capability, be readily accessible to the team for its review. Of specific interest are those documents which establish that your fire protection program satisfies NRC regulatory requirements and conforms to applicable NRC and industry fire protection guidance. For the B.5.b portion of the inspection, the documents implementing your mitigating strategies and demonstrating the management of your commitments for the strategies are of specific interest. Also, personnel should be available at the site during the inspection who are knowledgeable regarding those plant systems required to achieve and maintain safe shutdown conditions from inside and outside the control room (including the electrical aspects of the relevant post-fire safe shutdown analyses), reactor plant fire protection systems and features, and the Surry Power Station fire protection program and its implementation.

This letter does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing information collection requirements were approved by the Office of Management and Budget, under control number 3150-0011. The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

Your cooperation and support during this inspection will be appreciated. If you have questions concerning this inspection, or the inspection team's information or logistical needs, please contact McKenzie Thomas at (404) 997-4673, Rodney Fanner at (404) 997-4638 or me at (404) 997-4511.

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/

Michael F. King  
Engineering Branch 2  
Division of Reactor Safety

Docket Nos.: 50-280, 50-281  
License Nos.: DPR-32, DPR-37

Enclosures:

1. Triennial Fire Protection Program Supporting Documentation
2. Mitigating Strategies Supporting Documentation

cc w/encls: (See page 4)

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Michael F. King  
 Engineering Branch 2  
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cc w/encls: (See page 4)

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NAME	DJONES	MKING					
DATE	5/23/2012	5/23/2012	5/ /2012	5/ /2012	5/ /2012	5/ /2012	5/ /2012
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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cc w/encls:  
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Letter to David A. Heacock from Michael F. King dated May 23, 2012.

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## Triennial Fire Protection Program Supporting Documentation

Note: This is a broad list of the documents the NRC inspection team may be interested in reviewing, and possibly obtaining, during the information gathering site visit. Electronic media is preferred, if readily available. (The preferred file format on CD-ROM or DVDROM is “.pdf”). The CD/DVD-ROM should be indexed, hyperlinked, readable, and searchable to facilitate ease of use. Please provide 5 copies of each CD/DVD-ROM submitted. Information in “lists” should contain enough information to be easily understood by someone who has knowledge of the technology. The lead inspector will discuss specific information needs with the licensee staff and may request additional documents or electronic information.

1. The current version of the fire protection program and fire hazards analysis.
2. Corrective action closeouts as part of operator manual actions corrective actions.
3. List of identified fire induced circuit failure configurations for the selected fire areas/zones (to be determined during information gathering visit).
4. Corrective actions for fire-induced circuit failures, both single and multiple spurious actuations for the selected fire areas/zones (to be determined during information gathering visit).
5. Cable routing for components and equipment credited for safe shutdown for the selected fire areas/zones (to be determined during information gathering visit).
6. List of protected safe shutdown train equipment for the selected fire areas/zones (to be determined during information gathering visit).
7. Current versions of the fire protection program implementing procedures (e.g., administrative controls, surveillance testing, fire brigade).
8. Fire brigade training program and pre-fire plans.
9. Post-fire safe shutdown systems and separation analysis.
10. Post-fire alternative shutdown analysis.
11. Piping and instrumentation diagrams showing the components used to achieve and maintain hot standby and cold shutdown for fires outside the control room and those components used for those areas requiring alternative shutdown capability.
12. Plant layout and equipment drawings which identify the physical plant locations of hot standby and cold shutdown equipment.
13. Plant layout drawings which identify plant fire area delineation, areas protected by automatic fire suppression and detection, and the locations of fire protection equipment.
14. Plant layout drawings which identify the general location of the post-fire emergency lighting.

15. Plant operating procedures which would be used and describe shutdown from inside the control room with a postulated fire occurring in any plant area outside the control room, procedures which would be used to implement alternative shutdown capability in the event of a fire in the control or cable spreading room.
16. Maintenance and surveillance testing procedures for alternative shutdown capability and fire barriers, detectors, pumps and suppression systems.
17. Maintenance procedures that routinely verify fuse breaker coordination in accordance with the post-fire safe shutdown coordination analysis.
18. A list of significant fire protection and post-fire safe shutdown related design change packages and evaluations according to Generic Letter 86-10, "Implementation of Fire Protection Requirements."
19. The reactor plant's Individual Plant Examination for External Events (IPEEE), results of any post-IPEEE reviews, and listings of actions taken/plant modifications conducted in response to IPEEE information.
21. Organization charts of site personnel (including fire protection staff personnel).
22. If applicable, drawings of potential reactor coolant/recirculation pump lube oil system leakage points and associated lube oil collection systems.
23. Licensing basis documents for fire protection (safety evaluation reports, pertinent sections of the final safety analysis report, exemptions, deviations, letters to/from the NRC regarding fire protection/fire safe shutdown, etc.).
24. Procedures/instructions that control the configuration of the plant's fire protection program, features, and post-fire safe shutdown methodology, and system design.
25. A list of applicable codes and standards related to the design of plant fire protection features and evaluations of code deviations.
26. Procedures/instructions that govern the implementation of plant modifications, maintenance, special operations, and their impact on fire protection.
27. Internal and external self-assessments, audits, peer-assessments or similar reviews related to post-fire safe shutdown capability or the fire protection program completed since the previous NRC fire protection triennial inspection.
28. Recent quality assurance surveillances of fire protection activities.
29. A listing of open and closed fire protection condition reports (problem reports/nuclear condition reports/event analysis reports/problem identification, and resolution reports) since the last triennial inspection.



## Mitigating Strategies Supporting Documentation

Note: This is a broad list of the documents the NRC inspection team may be interested in reviewing, and possibly obtaining, during the information gathering site visit. The current version of these documents is expected unless specified otherwise. Electronic media is preferred, if readily available. (The preferred file format on CD-ROM or DVDROM is “.pdf”). The CD/DVD-ROM should be indexed, hyperlinked, readable, and searchable to facilitate ease of use. Please provide 5 copies of each CD/DVD-ROM submitted. The lead inspector will discuss specific information needs with the licensee staff and may request additional documents or electronic information.

1. A list of all modifications to regulatory commitments made to meet the requirements of Section B.5.b of NRC Order, EA-02-026, “Order for NRC Interim Safeguards and Security Compensatory Measures,” dated February 25, 2002, the subsequently imposed license conditions, and Title 10 of the *Code of Federal Regulations* (10 CFR) 50.54(hh)(2).
2. Lists of procedures/guidelines that were revised or generated to implement the mitigation strategies. These could be extensive damage mitigation guidelines (EDMGs), severe accident management guidelines (SAMGs), emergency operating procedures (EOPs), abnormal operating procedures (AOPs), etc.
3. A matrix that shows the correlation between the mitigation strategies identified in Nuclear Energy Institute 06-12, Revision 2, “B.5.b Phase 2 & 3 Submittal Guideline,” issued December 2006, and the site-specific procedures or guidelines used to implement each strategy.
4. Engineering evaluations/calculations that were used to verify engineering bases for the mitigation strategies.
5. Piping and instrumentation diagram for systems relied upon in the mitigation strategies. These could be of the type used for training.
6. A list of modification packages or simplified drawings or descriptions of modifications that were made to plant systems to implement the mitigation strategies.
7. Copies of procedures used to inventory equipment (hoses, fittings, pumps, etc.) required to implement the mitigation strategies.
8. A list of B.5.b strategies, if any, that have implementing details that differ from those documented in the submittals and the safety evaluation report.
9. A copy of site general arrangement drawing(s) that show the majority of buildings/areas referenced in B.5.b documents.
10. Training records, training matrix, and lesson plans related to B.5.b.
11. Copies of Memoranda of Understanding (MOUs) (e.g., with local fire departments) required to implement any mitigating strategies.