



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

August 17, 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: NORTH ANNA POWER STATION, UNITS 1 AND 2 – NOTIFICATION OF  
CONDUCT OF A TRIENNIAL FIRE PROTECTION BASELINE INSPECTION  
(NRC INSPECTION REPORT NOS. 05000338/2012012 AND  
05000339/2012012)**

Dear Mr. 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 North Anna Power Station, Units 1 and 2, in November and December 2012. The inspection team will be led by Mr. McKenzie Thomas, a Senior Reactor Inspector from the NRC Region II Office. The team will be composed of personnel from the 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. Inspection of circuit analysis is included in the inspection procedure.

On August 15, 2012, during a telephone conversation between Mr. Donald Taylor, North Anna Licensing Supervisor, and Mr. Thomas, 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 as follows:

- Information gathering visit: November 6-8, 2012
- Week 1 of onsite inspection: November 26-30, 2012
- Week 2 of onsite inspection: December 10-14, 2012

The purposes of the information gathering visit are to obtain information and documentation needed to support the inspection, to become familiar with the North Anna Power Station fire protection program, fire protection features, post-fire safe shutdown capabilities, plant layout, and 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). The types of documents the team will be interested in reviewing, and possibly obtaining, are listed in Enclosures 1 and 2. Please contact Mr. Thomas at (404) 997-4673 prior to preparing copies of the materials listed in the Enclosures. 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 inspection support administrative details: office space; specific documents to be made available to the team in their office space; arrangements for unescorted site access (including, as necessary, 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 North Anna Power Station fire protection program, including post-fire safe shutdown capability, be readily accessible to the team for their review. Of specific interest for the fire protection portion of the inspection 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, those 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 North Anna 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 Mr. Thomas at (404) 997-4673, 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 enclosures 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, Chief  
Engineering Branch 2  
Division of Reactor Safety

Docket Nos.: 50-338, 50-339  
License Nos.: NPF-4, NPF-7

Enclosures: 1. Triennial Fire Protection Inspection Support Documentation  
2. Mitigating Strategies Support Documentation

cc w/encls: (See page 4)

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PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	RA	RA					
NAME	MTHOMAS	MKING					
DATE	8/17/2012	8/17/2012	8/ /2012	8/ /2012	8/ /2012	8/ /2012	8/ /2012
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encls:

Mr. Gerald T. Bischof  
Site Vice President  
North Anna Power Station  
Virginia Electric & Power Company  
Electronic Mail Distribution

Fred Mladen  
Director, Station Safety & Licensing  
Virginia Electric and Power Company  
Electronic Mail Distribution

Michael Crist  
Plant Manager  
North Anna Power Station  
Virginia Electric & Power Company  
Electronic Mail Distribution

Lillian M. Cuoco, Esq.  
Senior Counsel  
Dominion Resources Services, Inc.  
Electronic Mail Distribution

Tom Huber  
Director, Nuclear Licensing & Operations  
Support  
Innsbrook Technical Center  
Electronic Mail Distribution

Virginia State Corporation Commission  
Division of Energy Regulation  
P.O. Box 1197  
Richmond, VA 23209

Attorney General  
Supreme Court Building  
900 East Main Street  
Richmond, VA 23219

Senior Resident Inspector  
North Anna Power Station  
U.S. Nuclear Regulatory Commission  
P.O. Box 490  
Mineral, VA 23117

Donald R. Taylor  
Licensing Supervisor  
North Anna Power Station  
P. O. Box 402  
Mineral, VA 23117-0402

Michael M. Cline  
Director  
Virginia Department of Emergency Services  
Management  
Electronic Mail Distribution

Executive Vice President  
Old Dominion Electric Cooperative  
Electronic Mail Distribution

County Administrator  
Louisa County  
P.O. Box 160  
Louisa, VA 23093

Doug Smith  
President  
(Public Correspondence Only)  
Lake Anna Civil Association  
Electronic Mail Distribution

Letter to David A. Heacock from Michael F. King dated August 17, 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. The current version of these documents is expected unless specified otherwise. Electronic media is preferred, if readily available. (The preferred file format is searchable “.pdf” files on CDROM. The CDROM should be indexed and hyperlinked to facilitate ease of use. Please provide 5 copies of each CDROM 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.

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 select fire areas.
4. Corrective actions for fire-induced circuit failures, both single and multiple spurious actuations for select fire areas.
5. Cable routing for components and equipment credited for safe shutdown for select fire areas.
6. List of protected safe shutdown train equipment for select fire areas.
7. Current versions of the fire protection program implementing procedures (e.g., administrative controls, surveillance testing, and 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 which 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.
20. Organization charts of site personnel (including fire protection staff personnel).
21. If applicable, drawings of potential reactor coolant/recirculation pump lube oil system leakage points and associated lube oil collection systems.
22. 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.).
23. Procedures/instructions that control the configuration of the plant's fire protection program, features, and post-fire safe shutdown methodology and system design.
24. A list of applicable codes and standards related to the design of plant fire protection features and evaluations of code deviations.
25. Procedures/instructions that govern the implementation of plant modifications, maintenance, and special operations, and their impact on fire protection.
26. 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.
27. Recent quality assurance surveillances of fire protection activities.
28. 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 is searchable “.pdf” files on CDROM. The CDROM should be indexed and hyperlinked to facilitate ease of use. Please provide 5 copies of each CDROM 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.

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 (e.g., with local fire departments) required to implement any mitigating strategies.