



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

August 31, 2016

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: MID-CYCLE ASSESSMENT LETTER FOR NORTH ANNA POWER STATION,  
UNITS 1 AND 2 – NRC INSPECTION REPORT 05000338, 339/2016005**

Dear Mr. Heacock:

On August 10, 2016, the Nuclear Regulatory Commission (NRC) completed its mid-cycle performance review of North Anna Power Station, Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from July 1, 2015, through June 30, 2016. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility.

The NRC determined that overall, North Anna, Units 1 and 2, operated in a manner that preserved public health and safety and met all cornerstone objectives. The NRC determined that the performance at North Anna Power Station, Units 1 and 2, during the most recent quarter was within the Licensee Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because all inspection findings had very low (i.e., green) safety significance, and all PIs indicated that your performance was within the nominal, expected range (i.e., green). Therefore, the NRC plans to conduct ROP baseline inspections at your facility.

The enclosed inspection plan lists the inspections scheduled through June 30, 2018. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the second half of the inspection schedule of the inspection plan are tentative and may be revised at the end-of-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

Additionally, the NRC plans on conducting two non-ROP baseline inspections which include North Anna Unit 1 Post Approval License Renewal (LR) Phase 1 and Post Approval LR Phase 2.

The NRC staff completed Temporary Instruction 2515/191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans" at North Anna Power Station, Units 1 and 2 on February 25, 2016, to confirm full implementation of orders Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" and Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation." The results of the inspection can be found in inspection report No. 05000338, 339/2016008.

In Staff Requirements Memorandum – SECY 16-0009, "Recommendations Resulting from the Integrated Prioritization and Re-Baselining of Agency Activities," the Commission approved the NRC staff recommendation to discontinue the formal mid-cycle assessment process beginning in calendar year 2017. This will be the final mid-cycle assessment letter. The staff will continue to conduct quarterly assessment meetings and communicate changes in the assessment of licensee performance in accordance with the guidance in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program."

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter 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).

Please contact me at 404-997-4609 with any questions you may have regarding this letter.

Sincerely,

*/RA/*

Steven D. Rose, Chief  
Reactor Projects Branch 5  
Division of Reactor Projects

Docket Nos.: 50-338, 50-339

License Nos.: NPF-4, NPF-7

Enclosure:

North Anna Inspection / Activity Plan  
(09/01/2016 – 06/30/2018)

cc Distribution via ListServ

The NRC staff completed Temporary Instruction 2515/191, "Inspection of the Implementation of Mitigation Strategies and Spent Fuel Pool Instrumentation Orders and Emergency Preparedness Communication/Staffing/Multi-Unit Dose Assessment Plans" at North Anna Power Station, Units 1 and 2 on February 25, 2016, to confirm full implementation of orders Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" and Order EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation." The results of the inspection can be found in inspection report No. 05000338, 339/2016008.

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(09/01/2016 – 06/30/2018)

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PUBLICLY AVAILABLE    NON-PUBLICLY AVAILABLE    SENSITIVE    NON-SENSITIVE  
ADAMS:  Yes   ACCESSION NUMBER: ML16244A207  SUNSI REVIEW COMPLETE  FORM 665 ATTACHED

|              |            |               |           |  |  |
|--------------|------------|---------------|-----------|--|--|
| OFFICE       | RII:DRP    | RII:DRP       | RII :DRP  |  |  |
| SIGNATURE    | BDB3       | SON via email | SDR2      |  |  |
| NAME         | BBishop    | SNinh         | SRose     |  |  |
| DATE         | 8/30 /2016 | 8/30/2016     | 8/30/2016 |  |  |
| E-MAIL COPY? | YES NO     | YES NO        | YES NO    |  |  |

D. Heacock

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Letter to David Heacock from Steven D. Rose dated August 31, 2016

SUBJECT: MID-CYCLE ASSESSMENT LETTER FOR NORTH ANNA POWER STATION,  
UNITS 1 AND 2 – NRC INSPECTION REPORT 05000338, 339/2016005

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Institute of Nuclear Power Operations (INPO)

**North Anna**  
**Inspection / Activity Plan**  
**09/01/2016 - 06/30/2018**

| Unit Number | Planned Dates |            | Inspection Activity                                     | Title   | No. of Staff on Site |
|-------------|---------------|------------|---|---|----------------------|
|             | Start         | End        |   |   |                      |
|             |               |            | <b>ISI - UNIT 1 IN-SERVICE INSPECTION</b>               |   | <b>1</b>             |
| 1           | 09/19/2016    | 09/23/2016 | IP 7111108P   | Inservice Inspection Activities - PWR   |                      |
|             |               |            | <b>LR - UNIT 1 POST APPROVAL LR PHASE 1</b>             |   | <b>2</b>             |
| 1           | 09/19/2016    | 09/23/2016 | IP 71003  | Post-Approval Site Inspection for License Renewal   |                      |
|             |               |            | <b>MODS - PLANT MODIFICATIONS INSPECTION</b>            |   | <b>3</b>             |
| 1, 2        | 04/17/2017    | 04/21/2017 | IP 7111117T   | Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications                  |                      |
| 1, 2        | 05/01/2017    | 05/05/2017 | IP 7111117T   | Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications                  |                      |
|             |               |            | <b>EP - EP PROGRAM INSPECTION</b>                       |   | <b>4</b>             |
| 1, 2        | 06/12/2017    | 06/16/2017 | IP 7111402  | Alert and Notification System Testing   |                      |
| 1, 2        | 06/12/2017    | 06/16/2017 | IP 7111403  | Emergency Preparedness Organization Staffing and Augmentation System                              |                      |
| 1, 2        | 06/12/2017    | 06/16/2017 | IP 7111404  | Emergency Action Level and Emergency Plan Changes   |                      |
| 1, 2        | 06/12/2017    | 06/16/2017 | IP 7111405  | Correction of Emergency Preparedness Weaknesses and Deficiencies                                  |                      |
| 1, 2        | 06/12/2017    | 06/16/2017 | IP 71151  | Performance Indicator Verification  |                      |
|             |               |            | <b>PI&amp;R - PROBLEM IDENTIFICATION AND RESOLUTION</b> |   | <b>5</b>             |
| 1, 2        | 07/10/2017    | 07/14/2017 | IP 71152B   | Problem Identification and Resolution   |                      |
| 1, 2        | 07/24/2017    | 07/28/2017 | IP 71152B   | Problem Identification and Resolution   |                      |
|             |               |            | <b>RP - RP PUBLIC RAD SAFETY BASELINE</b>               |   | <b>2</b>             |
| 1, 2        | 07/31/2017    | 08/04/2017 | IP 71124.06   | Radioactive Gaseous and Liquid Effluent Treatment   |                      |
| 1, 2        | 07/31/2017    | 08/04/2017 | IP 71124.07   | Radiological Environmental Monitoring Program   |                      |
| 1, 2        | 07/31/2017    | 08/04/2017 | IP 71151  | Performance Indicator Verification  |                      |
|             |               |            | <b>HS - TRIENNIAL HEAT SINK PERFORMANCE</b>             |   | <b>1</b>             |
| 1, 2        | 08/14/2017    | 08/18/2017 | IP 7111107T   | Heat Sink Performance   |                      |
|             |               |            | <b>ISI - UNIT 2 IN-SERVICE INSPECTION</b>               |   | <b>1</b>             |
| 2           | 09/18/2017    | 09/22/2017 | IP 7111108P   | Inservice Inspection Activities - PWR   |                      |
|             |               |            | <b>RP - RAD HAZARDS AND TRANSPORTATION</b>              |   | <b>2</b>             |
| 1, 2        | 09/18/2017    | 09/22/2017 | IP 71124.01   | Radiological Hazard Assessment and Exposure Controls  |                      |
| 1, 2        | 09/18/2017    | 09/22/2017 | IP 71124.08   | Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation |                      |
|             |               |            | <b>LR - POST APPROVAL LR PHASE 2</b>                    |   | <b>6</b>             |
| 1, 2        | 11/27/2017    | 12/01/2017 | IP 71003  | Post-Approval Site Inspection for License Renewal   |                      |
| 1, 2        | 12/11/2017    | 12/15/2017 | IP 71003  | Post-Approval Site Inspection for License Renewal   |                      |
|             |               |            | <b>ISI - UNIT 1 IN-SERVICE INSPECTION</b>               |   | <b>1</b>             |
| 1           | 03/19/2018    | 03/23/2018 | IP 7111108P   | Inservice Inspection Activities - PWR   |                      |

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

Enclosure

**North Anna**  
**Inspection / Activity Plan**  
**09/01/2016 - 06/30/2018**

| Unit Number  | Planned Dates |            | Inspection Activity | Title  | No. of Staff on Site |
|--|---------------|------------|---------------------|--|----------------------|
|  | Start         | End        |                     |  |                      |
| <b>RP - RP OCCUPATIONAL - WEEK 1</b>               |               |            |                     |  | <b>3</b>             |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71124.01         | Radiological Hazard Assessment and Exposure Controls   |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71124.02         | Occupational ALARA Planning and Controls               |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71124.03         | In-Plant Airborne Radioactivity Control and Mitigation |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71124.04         | Occupational Dose Assessment                           |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71124.05         | Radiation Monitoring Instrumentation                   |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71151-OR01       | Occupational Exposure Control Effectiveness            |                      |
| 1, 2   | 03/19/2018    | 03/23/2018 | IP 71151-PR01       | RETS/ODCM Radiological Effluent Occurrences            |                      |
| <b>SGISI - UNIT 1 SG IN-SERVICE INSPECTION</b>     |               |            |                     |  | <b>1</b>             |
| 1  | 03/26/2018    | 03/30/2018 | IP 7111108P         | Inservice Inspection Activities - PWR                  |                      |
| <b>RP - RP OCCUPATIONAL - WEEK 2</b>               |               |            |                     |  | <b>2</b>             |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71124.01         | Radiological Hazard Assessment and Exposure Controls   |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71124.02         | Occupational ALARA Planning and Controls               |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71124.03         | In-Plant Airborne Radioactivity Control and Mitigation |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71124.04         | Occupational Dose Assessment                           |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71124.05         | Radiation Monitoring Instrumentation                   |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71151-OR01       | Occupational Exposure Control Effectiveness            |                      |
| 1, 2   | 04/02/2018    | 04/06/2018 | IP 71151-PR01       | RETS/ODCM Radiological Effluent Occurrences            |                      |
| <b>TFPI - TRIENNIAL FIRE PROTECTION INSPECTION</b> |               |            |                     |  | <b>5</b>             |
| 1, 2   | 05/07/2018    | 05/11/2018 | IP 7111105T         | Fire Protection [Triennial]                            |                      |
| 1, 2   | 05/21/2018    | 05/25/2018 | IP 7111105T         | Fire Protection [Triennial]                            |                      |

This report does not include INPO and OUTAGE activities.  
This report shows only on-site and announced inspection procedures.

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