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

March 14, 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: RADIATION PROTECTION INSPECTION – SURRY POWER STATION

Dear Mr. Heacock:

On April 23-27, 2012, and May 14-18, 2012, the NRC will perform a baseline Radiation Safety Inspection at Surry Power Station, (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and Radiation Safety Sections of 71151).

Experience has shown that this inspection is resource intensive for both the NRC inspectors and your staff. In order to minimize the impact to your on-site resources and to ensure a productive inspection, we have enclosed a request for documents needed for this activity. It is important that all of these documents are up to date and complete, thereby minimizing the number of additional documents requested during the preparation and/or the onsite portions of the inspection. The inspector has requested that the subject informational material be provided in CD format on or before March 23, 2012.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Mr. Jerry Ashley of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Ruben Hamilton, at (404) 997-4672, or the Plant Support Branch 1 Chief, Brian Bonser, at (404) 997-4653.

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/

Brian R. Bonser, Chief
Plant Support Branch 1
Division of Reactor Safety

Docket No. 50-280, 50-281
License No. DPR-32, DPR-37

Enclosure:
Document Request List

cc w/encl.: (See page 3)

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/

Brian R. Bonser, Chief
Plant Support Branch 1
Division of Reactor Safety

Docket No. 50-280, 50-281
License No. DPR-32, DPR-37

Enclosure:
Document Request List

cc w/encl.: (See page 3)

Distribution w/encl:
C. Evans, RII EICS (Part 72 Only)
L. Douglas, RII EICS (Linda Douglas)
OE Mail (email address if applicable)
RIDSNRRDIRS
PUBLIC
RidsNrrPMSurry Resource

X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE X NON-SENSITIVE
ADAMS: X Yes ACCESSION NUMBER: ML12076A158 X SUNSI REVIEW COMPLETE X FORM 665 ATTACHED

OFFICE	RII: DRS/PSB1	RII: DRS/PSB1			
SIGNATURE	RA/BB For RH	RA/BB			
NAME	R. HAMILTON	B. BONSER			
DATE	03/14/2012	03/14/2012			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRSII\PSB1\INFORMATION REQUEST LETTERS\SURRY\SURRY 2012 REQUEST FOR INFORMATION LETTER REV1.DOC

cc w/encl:
Larry Lane
Site Vice President
Surry Power Station
Virginia Electric and Power Company
Electronic Mail Distribution

B. L. (Sonny) Stanley
Director, Nuclear Safety and Licensing
Virginia Electric and Power Company
Electronic Mail Distribution

Kenny B. Sloane
Plant Manager
Surry 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
Inssbrook Technical Center
Electronic Mail Distribution

Ginger L. Rutherford
Virginia Electric and Power Company
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
Surry Power Station
U.S. Nuclear Regulatory Commission
5850 Hog Island Rd
Surry, VA 23883

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

Pre-Inspection Document Request

Occupational Radiation Safety Cornerstone

Licensee:	Surry Power Station
Docket Number(s):	50-280, 50-281
Inspection Dates:	April 23-27, 2012, and May 14-18, 2012
Inspection Procedures:	71124.01 Radiological Hazard Assessment and Exposure Controls 71124.02 Occupational ALARA Planning and Controls 71124.03 In-Plant Airborne Radioactivity Control and Mitigation 71124.04 Occupational Dose Assessment 71124.05 Radiation Monitoring Instrumentation 71151 Performance Indicator Verification

Note: Unless specified otherwise, the current version of these documents is expected. Electronic media is preferred if readily available (The preferred file format is MSWord, or searchable ".pdf" files on CDROM). *Note that the inspectors cannot accept data provided on USB or "flash" drives due to NRC IT security policies.* To the extent possible, please organize the information in the order shown below. Experience has shown that a poorly organized CD leads to a less efficient inspection and places additional burden on licensee staff. If there are questions regarding the documents requested, please do not hesitate to contact the lead inspector.

Documentation for the inspection procedures from either November 19, 2010 or October 7, 2011, to the present is requested depending on which procedure is being performed. This reflects the last time particular areas were inspected. We would prefer as much of the information as possible in electronic form. An index to the CD contents is also helpful. For those items requesting a list of documents/areas, the inspector will select documents/areas from the list for on-site review.

If you have any questions, please call Ruben Hamilton at (404) 997-4672. Thank you in advance for all of your effort in putting together this material.

Assistance Requested During On-Site Inspection

- Identification of work activities available during the inspection for inspector observations, including notification of pre-job briefings, notification of diving activities, audio/visual surveillance for remote job coverage
- Health physics assistance in plant walk-downs assessing access controls, e.g. verifying the posting and locking of entrances to high and very high radiation areas (HRA and VHRA), and SFP controls
- Health physics assistance in plant walk-downs/job coverage of ongoing activities to assess access controls
- Discussions with appropriate individuals regarding access controls

General Information Request

- Plant Management, Radiation Protection, and Chemistry organizational charts w/ contact numbers
- Telephone numbers and name(s) of site contact(s) for each Inspection Procedure
- List of active radiation work permits with their administrative limits, electronic dosimeter dose rate limit, and dose limit
- Electronic copy of relevant UFSAR chapters (e.g., access controls, and radiation protection program)
- List of radiation protection procedures that includes title and number
- Outage schedule, including work activities to be conducted during the week(s) of the inspection
- Most recent DAW 10 CFR Part 61 analytical results
- Corrective Action Program procedures
- Procedure(s) for identifying, notification, tracking, and correcting PI occurrences
- List of all Performance Indicators (PIs) and copies of associated corrective action reports for Occupational Exposure Control Effectiveness and RETS/ODCM Radiological Effluent Occurrences
- Audits and self-assessments performed since November 19, 2010, that encompass the areas of (1) the ALARA program and implementation, (2) respiratory protection, and (3) airborne radioactivity, monitoring and/or mitigation-engineering controls

71124.01 - Radiological Hazard Assessment and Exposure Controls

1. List of active Radiation Work Permits (RWPs), including outage RWPs.
2. Most recent survey of all Locked HRAs and VHRAs (as applicable).
3. Most recent survey of Independent Spent Fuel Storage Installation (ISFSI) areas.
4. Procedures related to HP controls (e.g. Posting, labeling, surveys, RWPs, contamination control, HRA/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots, etc.).
5. Procedures related to release of personnel and materials (e.g. release surveys, decontamination, guidance for alarm follow up, etc.).
6. List of Nationally Tracked Sources and any change-of-ownership transactions.
7. List of all non-fuel items stored in spent fuel pool.
8. All self-assessments and audits covering HP controls since October 7, 2011.
9. LIST of CRs related to HP controls where the cause was listed as human performance (radworker error) or human performance (HP technician error) issued since January 2011. *This should be a list of corrective action documents containing an CR number and brief description, not full CRs*.
10. All CRs related to Nationally Tracked Sources since October 7, 2011.

71124.02 - ALARA Planning and Controls

1. Site and corporate procedures associated with maintaining site dose ALARA, including those involving ALARA work activities. These procedures should include:

    - ALARA program implementation, including ALARA committee activities and ALARA planning, briefing, and reviews
    - Radiation work permit preparation and worker compliance
    - Processes used to estimate and track work activity specific exposures

- Making changes to dose estimates during task performance
- Work controls
- Engineering controls
- Exposure mitigation requirements

2. Most recent annual ALARA report and most recent refueling outage report.

3. Annual ALARA goals for 2010, 2011, and 2012, and the methodology utilized to make the projections.

4. Historic trends and the current status/characterization of plant source term.

5. ALARA Committee activity summaries (e.g. meeting minutes) for three months or 3 meetings prior to, and after the last refueling outage.

6. ALARA Committee activity summaries (e.g. meeting minutes) discussing activities associated with the upcoming refueling outage.

7. Completed ALARA packages (including post-job reviews) for the five work activities that were completed during the last outage which had the greatest collective dose and/or presented significant radiological risk.

8. List of five activities (including ALARA package number) from the previous outage in which the work scope changed or was extended and alternative ALARA measures were taken to respond to the emergent conditions.

9. List of five activities from the previous outage in which the estimated work hours were significantly different than the actual hours expended. List five activities in which the estimated and actual hours expended were accurate.

10. Outline of the source term reduction strategy. Information should include:

    - Historic trends and current status of plant source term
    - Factors that affect the source term
    - Activities employed to reduce the source term
    - Specific sources identified for reduction actions
    - Source term reduction evaluation
    - Results achieved since November 19, 2010

11. List of activities since November 19, 2010, that were reviewed for ALARA problems and actions taken to prevent recurrence. Include corrective action report number(s) if applicable.

12. List of corrective action reports generated since November 19, 2010, related to the ALARA program, including the following:

    - ALARA planning
    - Post-job review identified problems
    - Radiation worker practices

- Occurrences where the collective exposure was greater than intended dose determined to be ALARA for the individual work activities

13. Available for onsite review during the inspection: (Please do not provide any records which contain personally identifiable information such as social security number and name on the CD)

    - ALARA planning packages for jobs performed during the outage
    - Temporary shielding requests generated for the outage
    - Records of personnel monitored for radiation exposure that show the total TEDE to date for each person. If possible, sort individuals by work group

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

1. Site and corporate procedures/manuals associated with airborne radiation monitoring instrumentation and respiratory protection. Procedures/manuals should include:

    - Operation, calibration, and maintenance of air sampling instrumentation, including set-point determination (e.g., low-vols, high vols, goosenecks, AMS 4s, etc.)
    - Calibration and maintenance of portable instruments
    - Actions to be taken when air sampling instrumentation is found to be significantly out of tolerance/calibration
    - Issuance and use of respiratory protective equipment (emphasis on SCBA and air-supplied equipment)
    - Training, including fit-testing, for use of SCBA and supplied-air systems
    - SCBA maintenance activities, including vital components (i.e. regulators)
    - Determination/verification of Grade D air for SCBA

2. Two most recent calibrations for the following Continuous Air Monitoring (CAM) equipment:

    - Control Room Ventilation
    - Spent Fuel Pool
    - Radioactive Waste Processing

3. Records of certification of air quality for equipment used to provide breathing air for air-supplied respirators and SCBA bottles since November 19, 2010.

4. List of corrective action reports generated since November 19, 2010 involving radiation monitoring and protective equipment deficiencies, including the following:

    - Continuous air monitors
    - Respiratory protection equipment and program implementation

5. Available for onsite review by inspector during inspection*:*

    - Inventory, inspection, and maintenance records for SCBA equipment
    - Training records, including fit-testing, for SCBA-qualified individuals

- Training records/certification for individuals qualified to perform maintenance on vital components (e.g. regulators) on SCBA

71124.04: Occupational Dose Assessment

1. Provide Procedures/Guidance Documents for external dose monitoring, i.e. dosimetry issuance and use. The documents should include:

   - Guidance for multi-badging; monitoring in steep/highly variable dose rate gradients
   - Personnel contamination events; storage/care of personal dosimeters; use of electronic dosimeters including evaluation of any biases identified relative to TLD monitoring
   - Internal dose assessment, i.e., both *in vivo* and *in vitro* bioassay and air sampling capabilities. The documents should include guidance for calibration/QC and use of whole body counter (WBC); release of contaminated individuals, use of passive monitoring as screening method for evaluations, and special *in vitro* sample collection and analysis, and actions for declared pregnant workers

2. NVLAP accreditation documentation for current dosimetry used by the site.

3. List of all positive whole body count (WBC), in vitro, or air sampling analyses which resulted in an assigned CEDE equal to or exceeding 10 millirem since November 19, 2010. *[Note: only a listing should be provided for use by the inspectors to select a sample of issues for in-depth review during the onsite inspection]*.

4. List of all personnel contamination events, dispersed contamination/discrete particles, identified since November 19, 2010. *[Note: only a listing should be provided for use by the inspectors to select a sample of issues for in-depth review during the onsite inspection]*.

5. Copies of all audits, self-assessments, and/or reviews related to internal or external dosimetry issues generated since January 1, 2011. The documents provided should include any reviews/evaluations conducted of vendor facilities, e.g., corporate or outside vendor/ or corporate calibration facilities.

6. Provide a list of Condition Report (CR) documents generated since November 19, 2010, for Internal or external dosimetry issues/events. *[Note: only titles and a summary statement should be provided for use by the inspectors to select a sample of issues for in-depth review]*.

71124.05 - Radiation Monitoring Instrumentation

1. Procedures/Guidance Documents for:

   - use of portable instrument calibrators (e.g. Shepherd calibrator)
   - calibration and functional test/source checks of portable radiation detection instrumentation

- calibration and functional tests of small article monitor (SAM), personnel contamination monitor (PCM), portal monitor (PM), whole body counting (WBC) equipment; and continuous air monitors (CAMs)
- determination of set-points for Area Radiation Monitor (ARM), CAM, PCM, PM and SAM equipment
- collection and analysis of high-range, post accident effluent samples
- QA program for count room instruments (e.g. laboratory inter-comparison data)

2. The last 2 calibration records for the following monitors:

   1-GW-RM-130/131 A/B/C Process Vent Particulate and Noble gas monitors
   1-RRM-RE-131 Liquid Waste Disposal.
   1/2- SV-RM-111/121 Condenser Air Ejector.
   1 /2- CH-RM-118/218 Reactor Coolant Letdown.
   1 /2 -RM-RMS-127/128 & 128/228 Containment High Range Area Radiation Monitor.
   1-RM-RMS-157 Main Control Room Area Radiation Monitor.
   All personnel contamination and tool monitors at RCA exit point.
   Count room high-purity Germanium detector(s).
   Count room liquid scintillation detector(s).

3. Certificates for the sources used to calibrate the above requested monitors showing traceability to a national standard (NIST), as applicable.

4. The last 2 calibration records of the portable instrument calibrator (Shepherd validation testing).

5. List of any Emergency Action Level (EAL) value associated with installed or portable radiation monitoring instrument indication(s).

6. Copies of all audits, self-assessments, and/or reviews of area and personnel monitoring equipment and portable radiation survey instruments generated since November 19, 2010. The records should include any reviews conducted of vendor facilities, e.g., outside calibration laboratories, as applicable.

   List of CRs generated since November 19, 2010, related to portable instruments, effluent and area monitors, CAMs, RCA release point monitors, WBCs, and count room instruments. *This should be a list of corrective action documents containing a CR number and brief description, not full CRs.*

71151 – Performance Indicator (PI) Verification

1. Monthly PI reports since October 7, 2011, and copies of associated condition reports for any RETS/ODCM Radiological Effluent occurrences.

2. Liquid and gaseous effluent release permits which specify the monthly, quarterly, and annual curies released by isotope and associated public dose assessments since October 7, 2011.

3. List of all corrective action documents since October 7, 2011, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, etc.

4. List of all electronic dosimeter (ED) dose rate alarms > 1 R/hr and all ED dose alarms since October 7, 2011.

Inspector Contact Information:
Ruben Hamilton
(404) 997-4672
ruben.hamilton@nrc.gov

Mailing Address
US Nuclear Regulatory Commission, Region II
ATTN: Ruben Hamilton
245 Peachtree Center Ave., NE
Suite 1200
Atlanta, GA 30303