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

October 14, 2010

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

SUBJECT: SURRY NUCLEAR STATION, NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Heacock:

During the periods of November 1-5 and November 15-19, 2010, the NRC will perform the baseline Occupational Radiation Safety Inspection at the Surry Nuclear Station, (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and Radiation Safety Sections of 71151. Additionally, temporary instruction TI 2515/179 will be performed to review the category 1 and 2 sources reported to the National Source Tracking System as part of 71124.01. Experience has shown that this inspection is resource intensive both for 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 inspection. It is important that all of these documents are up to date and complete, in order to minimize the number of additional documents requested during the preparation and/or the onsite portions of the inspection.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Barry Garber (757)-365-2725 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.

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

Enclosure: Occupational Radiation Protection Inspection Document Request

October 14, 2010

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☐ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☐ NON-SENSITIVE

ADAMS: ☐ Yes ACCESSION NUMBER:_____ ☐ SUNSI REVIEW COMPLETE

OFFICE	RII:DRS	RII:DRS					
SIGNATURE	BRB /RA for/	BRB /RA/					
NAME	RHamilton	BBonser					
DATE	10/14/2010	10/14/2010					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRSII\PSB1\INFORMATION REQUEST LETTERS\SURRY\SURRY DOC REQ NOV 2010.DOCX

cc w/encl:
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Letter to David A. Heacock from Brian Bonser dated October14, 2010

SUBJECT: SURRY NUCLEAR STATION, NOTIFICATION OF INSPECTION AND REQUEST FOR INFORMATION

Distribution w/encl:
C. Evans, RII
L. Douglas, RII
OE Mail
RIDSNRRDIRS
PUBLIC
RidsNrrPMSurry Resource

Pre-Inspection Document Request

Occupational Radiation Safety Cornerstone

Licensee:	Surry Nuclear Station
Docket Numbers:	50-280, 50-281
Inspection Dates:	November 1-5 and November 15-19, 2010

Inspection Procedures to be performed:

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
TI 2515/179	Verification Of Licensee Responses To NRC Requirement For Inventories Of Materials Tracked In The National Source Tracking System Pursuant To Title 10, Code Of Federal Regulations, Part 20.2207 (10 CFR 20.2207) (Note: TI2515/179 will be performed as a subset of 71124.01)

Documentation is requested from June 2009 to the present for all items.

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 inspectors will select documents/areas from the list for on-site review. If any of the requested information is too burdensome to provide electronically or as hard copies, simply indicate that the requested material is available for onsite review by the inspectors.

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

Assistance Requested During On-Site Inspection

- Identification of work activities 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 HDR-HRA and VHRA, and spent fuel pool controls
- Health physics assistance in plant walk-downs/job coverage of ongoing outage activities to assess access controls and ALARA practices
- Discussions with appropriate individuals regarding access controls and ALARA planning

General Information Request

- Telephone numbers of contacts
- Plant and Radiation Protection organizational charts.

- Electronic copy of applicable chapters of UFSAR (e.g. radiation protection program.)
- Outage schedule, including work activities to be conducted during the week(s) of the inspection
- List of active radiation work permits, including those specific to outage activities, with their administrative limits, electronic dosimeter dose rate limit, and dose limit
- List of radiation protection procedures
- 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 the last inspection that encompasses the areas of (1) access controls and (2) the ALARA program and implementation
- Procedures associated with the ISFSI facility. Procedures should include:
    - Radiological surveys, postings, and radiation control barricades
    - Environmental monitoring (including TLDs)
    - Loading of casks
    - Routine activities
- Radiation surveys of the ISFSI since the last inspection.
- ALARA reviews and planning and associated RWPs for Risk Significant Jobs
- Records of contamination incidents since the last inspection.
- List of corrective action reports related to the ISFSI with respect to radiation protection (i.e. access controls, ALARA, contamination, radiation levels, etc.) since the last inspection

71124.01: Radiological Hazard Assessment and Exposure Controls

- Site and corporate procedures associated with the access control program. Procedures should include:
    - Radiological surveys, postings, and radiation control barricades
    - Security and control of high radiation sources/objects stored in pools
    - Radiation Work Permits
    - Radiological Job-Coverage
    - Controlling access to High Radiation Areas (HRAs), High Dose Rate High Radiation Areas (HDR-HRAs), and Very High Radiation Areas (VHRAs)
    - Key controls for all high radiation areas
    - Radioactive material control, including contamination and hot particles
- List of the 10 most exposure significant work areas within radiation areas, high radiation

areas (<1R/hr), or airborne radioactivity areas in the plant. This may include areas with low dose rates but high collective dose. Identify any high radiation areas with significant dose gradients (factor of five or more), including underwater diving activities.

- List of LHRAs, HDR-HRAs (>25 rem in one hour @ 30 cm), and VHRAs. Include areas with the potential to become a LHRA during routine operations or outages.

- List of corrective action reports generated since the last inspection related to access controls, including the following:

  - Access controls, including high radiation area radiological incidents
  - Radiological events caused by radiation worker errors
  - Radiological events caused by radiation protection technician errors

- Available for onsite review during inspection:

  - Elevation maps with most recent operating and outage radiation survey levels.
  - RWPs for the top five dose rate areas or tasks.
  - National Source Tracking System documentation including source inventory and administrative data from National Source Tracking System. (TI 2515/179)

71124.02: ALARA Planning and Controls

- 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

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

- Annual ALARA goals for 2009 and 2010 and the methodology utilized to make the projections.

- Historic trends and current status of plant source term.

- List approximately 10-15 work activities planned during the inspection likely to result in the highest personnel collective exposures and those which present the greatest radiological risk to workers (e.g. work in HRAs, diving, potentially changing radiological conditions). Include the dose projections and ALARA package numbers.
- ALARA Committee activity summaries (e.g. meeting minutes) for three months or 3

meetings (whichever is greater) after the last refueling outage and the three months or 3 meetings prior to the upcoming refueling outage.

- 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.

- 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.

- 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.

- 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 last inspection

- List of activities since that last inspection that were reviewed for ALARA problems and actions taken to prevent recurrence. Include corrective action report number(s) if applicable.

- List of corrective action reports generated since the last inspection 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

- Available for onsite review during the inspection:

    - ALARA planning packages for jobs being 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

- 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
  - 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

- Two most recent calibrations for the following CAM equipment:

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

- Records of certification of air quality for equipment used to provide breathing air for air-supplied respirators and SCBA bottles since the last inspection.

- List of corrective action reports generated since the last inspection involving radiation monitoring and protective equipment deficiencies, including the following:

  - Continuous air monitors
  - Respiratory protection equipment and program implementation.

- *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

- Site and corporate procedures/manual associated with internal and external dosimetry program (e.g., Whole body counters, TLDs, electronic dosimeters, bioassays, declared pregnant workers, neutron monitoring, multibadging, etc.)

- NVLAP accreditation for dosimetry used to monitor personnel

- Last calibration of Whole Body Counter (WBC) equipment and copy of the analysis library

- Two most recent calibrations for PCMs used to monitor employees prior to issuance and return of dosimetry

- Correction factors used to address the response of electronic dosimeters as compared to TLDs.

- Internal dose assessments since last outage inspection using in-vitro monitoring.

- Internal dose assessments for any actual internal exposure greater than 10 millirem CEDE since the last outage inspection.

- Skin dose assessments since the last outage inspection.

- Available for onsite review during the inspection:

    - Records for declared pregnant workers since the last outage inspection, listing their monthly radiation exposure during the term or year-to-date.

- List of corrective action reports generated since the last inspection involving internal and external dosimetry issues (e.g., adverse trends related to EDs, occupational dose assessments, etc.)

71124.05: RADIATION MONITORING INSTRUMENTATION

- Copies of the CY 2008 and CY 2009 ARERR documents
  [Note: provided as part of the General Information Request and duplication is not required]

- Provide Procedures/Guidance Documents for:
    - use of portable instrument calibrators
    - calibration and functional test/source checks of portable radiation detection instrumentation
    - Calibration and functional tests of small article monitor (SAM), personnel contamination monitors (PCM), portal monitor (PM), and whole body counting (WBC) equipment; for area radiation monitor (ARM) and continuous air monitor (CAM) equipment.
    - determination of set-points for ARM, CAM, PCM, PM and SAM equipment used for area and personnel monitoring equipment, as applicable
    - collection and analysis of high-range, post accident iodine and effluent samples

- Provide a list of in-service SAM, PCM, PM, and WBC equipment *[Note: the list will be used to select 3 to 5 monitors for evaluation of their calibration/functional check surveillances during the onsite inspection. In addition, portable radiation detection instrumentation will be selected at random to evaluate adequacy of calibrations.]*
- Provide the previous two sets of calibration data for the following effluent monitors: main stack radiation monitor, liquid process radiation monitor, and Unit 1 reactor building ventilation monitor

- Provide the previous two sets of calibration data for the following monitors:

    - Common plant vent radioactive discharge
    - Containment Airborne Radioactivity (Both Units)
    - Control room ventilation radiation monitors
    - Containment High Range Area Radiation Monitors (CHRMS) (Both Units)

- Copies of all audits, self-assessments, and/or reviews of area and personnel monitoring equipment and portable radiation survey instruments generated since June, 2009. The records should include any reviews conducted of vendor facilities, e.g., outside calibration laboratories
- Provide a list of Condition Report (CR) documents generated since June, 2009, for gaseous and liquid effluent monitoring activities, for ARM and/or CAM operability issues, effluent monitoring equipment or monitoring activities; and for the release of licensed material outside of the radiologically controlled area (RCA) *[Note: only titles/summary statement should be provide for use by the inspectors to select a sample of issues for in- depth review]*

71151: Performance Indicator Verification (Occupational and Public Radiation Safety)

- Procedure(s) for identifying, notification, tracking, and correcting PI occurrences
- Monthly PI reports since June 2009, and copies of associated corrective action reports for RETS/ODCM Radiological Effluent occurrences
- All final release point effluent monitor out-of-service dates since June 2009
- Monthly Occupational Exposure Control PI reports since June 2009 and copies of associated correction action reports
- List of all corrective action documents since June 2009 using keywords: HRA, LHRA, VHRA, unintended dose, unlocked door, etc.
- List of all dose rate alarms > 1 R/hr and dose alarms since June 2009.