



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

August 20, 2015

Mr. David A. Heacock  
President & Chief Nuclear Officer  
Virginia Electric and Power Company  
Surry Power Station, Units 1 & 2  
Innsbrook Technical Center  
5000 Dominion Boulevard  
Glen Allen, VA 23060

**SUBJECT: SURRY POWER STATION NOTIFICATION OF INSPECTION AND  
REQUEST FOR INFORMATION**

Dear Mr. Heacock:

During the week of October 19 - 23, 2015, the U.S. Nuclear Regulatory Commission (NRC) will conduct a baseline Radiation Safety Inspection at the Surry Power Station, Units 1 and 2. The inspection will evaluate activities in the Occupational and Public Radiation Safety cornerstone using NRC Inspection Procedures 71124.01, 71124.08, and portions of Temporary Instruction 2800/041. In order to minimize the impact to your onsite 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 portion of the inspection. The NRC requests that the requested documents be provided to the inspectors in CD format, on or before October 9, 2015.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Kimberly Mitchell, 757-365-2490, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Robert Kellner at 404-997-4508, or the Plant Support Branch 1 Chief, Brian Bonser at 404-997-4653.

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 numbers 3150-0008, 3150-0011, 3150-0014, and 3150-0044. 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.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public inspections, exemptions, requests for withholding," of the "NRC's Agency Rules of Practice and Procedure," 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 Agencywide Documents Access and Management System (ADAMS); accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

***/RA by Wade Loo Acting for/***

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

Docket Nos. 50-280 and 50-281  
License Nos. DPR-32 and DPR-37

Enclosure:  
Pre-Inspection Document List

cc: Distribution via Listserv

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ADAMS: X Yes    ACCESSION NUMBER: ML15232A500    X SUNSI REVIEW COMPLETE    X FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1					
SIGNATURE	RXK3	WTL for BRB1					
NAME	R. Kellner	B. Bonser					
DATE	8/ 20 /2015	8/ 20 /2015					
E-MAIL COPY	YES    NO	YES    NO					

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**PRE-INSPECTION DOCUMENT LIST  
PUBLIC RADIATION PROTECTION INSPECTION**

Occupational and Public Radiation Safety Cornerstone

Licensee:	Surry Power Station
Docket Numbers:	05000280 and 05000281
Inspection Dates:	October 19 – 23, 2015
Inspection Procedures (IPs):	IP 71124.01 - Radiological Hazard Assessment and Exposure Controls IP 71124.08 - Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation Temporary Instruction (TI) 2800/041 - Title 10 CFR Part 37 Materials Security Review – At Facilities with a Title 10 CFR Part 73 Physical Protection Program

**Note:** This is a list of the documents the NRC inspectors will be interested in obtaining and reviewing prior to the on-site inspection visit. The current version of these documents is expected unless specified otherwise. Electronic media is preferred, if readily available. (The preferred file format is Word or searchable “pdf” files on CDROM. Please provide three copies of each electronic media device submitted.) Information in the “document lists” should contain enough information to be easily understood by someone who has knowledge of the subject. The lead inspector can answer questions regarding questions on specific information needs with licensee staff and may request additional documents.

Documentation is requested from April 26, 2014, to the present, unless otherwise noted for the inspection procedures. 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 onsite review.

If you have any questions, please call Robert Kellner at 404-997-4508. Thank you in advance for all of your effort in putting together this material.

**General Information Needed**

- List of primary contacts for each inspection area with telephone numbers.
- Plant Management, Radiation Protection, and Chemistry organizational charts with contact numbers.
- List of radiation protection procedures that includes titles and numbers.
- Outage schedule, including work activities, to be conducted during the week of the inspection (Gantt chart is sufficient).
- Procedures for issuing and assessing issues for risk significance and followup actions (i.e., Corrective Action Program procedures).

Enclosure

- Audits and self-assessments performed since April 2014 that encompass the Operational Radiation Protection Program.

#### **71124.01 - Radiological Hazard Assessment and Exposure Controls**

1. List of active Radiation Work Permits (RWPs), including planned and contingency outage RWPs, with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
2. Most recent survey of all locked high radiation areas (LHRAs) and very high radiation areas (VHRAs), as applicable.
3. Procedures related to health physics (HP) controls (e.g., Posting, labeling, surveys, RWPs, contamination control, high radiation area (HRA)/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots).
4. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, guidance for alarm followup).
5. List of National Source Tracking System (NSTS) sources and any change-of-ownership transactions since April 2014.
6. Documentation of annual NSTS sources inventory reconciliation for 2015.
7. List of all non-fuel items stored in spent fuel pool (SFP).
8. All self-assessments and audits covering HP controls since April 2014.
9. List of condition reports (CRs) related to HP controls where the cause was listed as human performance (radworker error) or human performance (HP technician error) issued since April 26, 2014. *[This should be a list of corrective action documents containing a CR number and brief description, not full CRs.]*
10. All CRs related to NSTS sources since April 2014.

#### **71124.08 - Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation**

1. Provide procedures/guidance documents describing licensee compliance with 10 CFR Parts 20, 61, and 71, and 49 CFR Parts 170-189. Procedures/manuals should include:
  - Solid and liquid radwaste processing procedures.
  - Procedure(s) for transferring radioactive waste resin and sludge discharges into shipping/disposal containers.
  - Waste stream mixing and/or sampling procedures, including: (1) waste concentration averaging; (2) use of scaling factors and calculations used to account for difficult-to-measure radionuclides; and (3) ensuring waste stream composition data accounts for changing operational parameters.
  - Shipping/transportation procedures.
  - Cask loading and closure procedures (licensee and vendor) applicable to last three cask transports.
  - List of radioactive material (RAM) storage areas, including satellite radiological controlled areas (RCAs).
  - Monitoring impact of long-term storage (e.g., buildup of gases produced by waste decomposition, chemical reactions, container deformation).
  - Process Control Program (PCP).
2. Most recent radio-chemical sample analysis results (i.e., 10 CFR Part 61 analysis) for each of the identified radioactive waste streams (e.g., dry active waste (DAW), ion exchange resins, mechanical filters, and sludges and activated materials).

3. List and documentation of any changes made to the radioactive waste processing systems (liquid and solid) and/or the PCP since October 2013 and associated 10 CFR 50.59 documentation, as appropriate.
4. Copies of applicable transport cask Certificate of Compliance for the last three transport cask shipments.
5. Training and qualification records for personnel responsible for radioactive waste processing and RAM shipment preparation activities.
6. Log of RAM shipments (LSA I, II, III; SCO I, II, Type A, or Type B) since October 2013. (The inspectors will select 3-5 packages to review in detail.)
7. List of corrective action reports generated since October 2013, involving radioactive waste and RAM/waste transportation.
8. Available for onsite review during the inspection:
  - Site drawing(s) showing the location of all stored RAMs and all stored radioactive waste.
  - Plant drawings sufficient to permit the inspector to walkdown the liquid and solid radioactive waste processing systems, to verify current system configuration/operation agree with the descriptions contained in the Updated Final Safety Analysis Report, and in the PCP.
  - Documentation describing the status of any radioactive waste process equipment that is not operational, and/or is abandoned in place.
  - Information concerning the site's waste disposal volume and waste reduction program.
  - Training curriculum and primary lesson plans for qualifying persons, including vendors, for radwaste processing, packaging, and making shipments of RAMs and radioactive waste as specified by 49 CFR Part 172. Liquid and solid radwaste system diagrams and detailed system descriptions (e.g., information that might be contained in curricula for training new system engineers).

**Technical Instruction 2800/041 - Title 10 CFR Part 37 Materials Security Review – At Facilities with a Title 10 CFR Part 73 Physical Protection Program** (Radiation Protection portions only)

1. All procedures related to 10 CFR Part 37 compliance (storage of RAM, 10 CFR Part 37 Security Plan, etc.).\*
2. List of all known locations of Category 1 and 2 material.
3. All supporting calculations for determination of whether an aggregation of RAM meets the definition of Category 1 or Category 2 (e.g., warehouse calculation).
4. Other documents needed have been requested in the previous procedures that are related to the inspection of the TI.

\*Please do not include Safeguards or Official Use Only information in the submittal. That information can be reviewed onsite.

**Assistance Requested During Onsite 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.
- HP assistance in plant walkdowns of areas identified for storage of Category 1 and 2 materials.

- An inspector will need to observe any shipments or receipts of RAM.
- HP assistance in plant walkdowns of radwaste processing systems.
- HP assistance in plant walkdowns assessing access controls (e.g., verifying the posting and locking of entrances to HRAs and VHRAs, and SFP controls.
- HP assistance in plant walkdowns/job coverage of ongoing activities to assess access controls
- Discussions with appropriate individuals regarding access controls

Inspector Contact Information

Robert Kellner  
404-997-4508  
[robert.kellner@nrc.gov](mailto:robert.kellner@nrc.gov)

Mailing Address

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Region II  
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245 Peachtree Center Ave., NE  
Suite 1200  
Atlanta, GA 30303

**LIST OF ACRONYMS**

CRs	Condition Reports
DAW	Dry Active Waste
HP	Health Physics
HRAs	High Radiation Areas
IPs	Inspection Procedures
LHRAs	Locked High Radiation Areas
NSTS	National Source Tracking System
PCP	Process Control Program
RAMs	Radioactive Materials
RCAs	Radiological Controlled Areas
RWPs	Radiation Work Permits
SFP	Spent Fuel Pool
TI	Temporary Instruction
VHRAs	Very High Radiation Areas