



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

May 9, 2011

Mr. Thomas D. Gatlin
Vice President - Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
P.O. Box 88
Jenkinsville, SC 29065

**SUBJECT: V.C. SUMMER NUCLEAR STATION NOTIFICATION OF INSPECTION AND
REQUEST FOR INFORMATION**

Dear Mr. Gatlin:

During the period of June 27-July 1, 2011, the NRC will conduct a baseline radiation safety inspection at the V.C. Summer Nuclear Station. The inspection will evaluate activities in the Occupational Radiation Safety cornerstone using NRC Inspection Procedures (IP) 71124.02 Occupational ALARA Planning and Controls, 71124.03 In-Plant Airborne Radioactivity Control and Mitigation, 71124.04 Occupational Dose Assessment, 71124.08 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation, and 71151 Performance Indicator Verification (Public Radiation Safety).

Most of these procedures went into effect at the beginning of 2010, and have not been performed at V.C. Summer in their current form. Therefore, the base date for documentation requested is from January 1, 2010.

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, 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 June 15, 2011. This will increase the time available for plant staff to assemble the documents.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Susan Reese of your organization. If there are any questions about this inspection or the material requested, please contact the 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.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket No.: 50-395
License No.: NPF-12

Enclosure
Pre-Inspection Document Request

cc w/encl.: (See page 3)

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OFFICE	RII: DRS	RII: DRS					
SIGNATURE	RA	RA					
NAME	R. HAMILTON	B. BONSER					
DATE	05/06/2011	05/09/2011					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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cc w/encl:

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**Pre-Inspection Document Request
Occupational Radiation Safety Cornerstone**

Licensee: V.C. Summer Nuclear Station

Docket Number(s): 05000395

Inspection Dates: June 27 - July 1, 2011

Procedures:

71124.02	Occupational ALARA Planning and Controls
71124.03	In-Plant Airborne Radioactivity Control and Mitigation
71124.04	Occupational Dose Assessment
71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation
71151	Performance Indicator Verification

Documentation is requested from January 1, 2010, to the present 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 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 candidate work activities during the inspection for inspector observation, such as radiologically significant jobs.

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General Information Request

- Telephone numbers of contacts.
- Plant and Radiation Protection organizational charts, including personnel involved in solid radwaste processing and transportation of radwaste/radioactive materials.
- List of active radiation work permits with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
- List of radiation protection procedures.
- 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.

Enclosure

- Audits and self-assessments performed since January 1, 2010, that encompass the areas of (1) the ALARA program and implementation, (2) airborne radioactivity, monitoring and/or mitigation-engineering controls, (3) liquid and solid radwaste processing, and (4) transportation of radioactive material/radwaste.

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, 2010, and 2011, and the methodology utilized to make the projections.
- Historic trends and current status of plant source term.
- ALARA Committee activity summaries (e.g. meeting minutes) for three months or 3 meetings prior to, and after the last 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 the 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: (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

- 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.
- 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

- 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.
- NVLAP accreditation documentation for current dosimetry used by site.
- 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 January 1, 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].
- List of all personnel contamination events, dispersed contamination/discrete particles, identified since January 1, 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].
- Copies of all audits, self-assessments, and/or reviews related to internal or external dosimetry issues generated since January 1, 2010. The documents provided should include any reviews/evaluations conducted of vendor facilities, e.g., corporate or outside vendor/or corporate calibration facilities.
- Provide a list of Condition Report (CR) documents generated since January 1, 2010, for internal or external dosimetry issues/events. [Note: only titles/summary statement should be provided for use by the inspectors to select a sample of issues for in-depth review].

71124.08: Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

- Site and corporate procedures/manuals 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.
 - Process Control Program (PCP).
- Most recent Annual Radioactive Effluents Release Report.
- Most recent radio-chemical sample analysis results (i.e., "10 CFR Part 61" analysis) for each of the radioactive waste streams (e.g., dry active waste (DAW), ion exchange resins, mechanical filters, and sludges and activated materials, etc.).
- List and documentation of any changes made to the radioactive waste processing systems (liquid and solid) and/or the PCP since the last inspection and associated 10 CFR Part 50.59 documentation as appropriate.
- Copies of applicable transport cask Certificate of Compliance for the last three transport cask shipments.
- Training and qualification records for personnel responsible for radioactive waste processing and radioactive material shipment preparation activities.
- Copy of the Radioactive Shipping Log for the last 12 months (The inspector will select transportation shipping packages for review during the inspection).
- List of corrective action reports generated since the last inspection involving radioactive waste and radioactive material/waste transportation.
- Available for onsite review during the inspection:
 - Site drawing(s) showing the location of all stored radioactive materials and all stored radioactive waste.
 - Plant drawings sufficient to permit the inspector to walk-down the liquid and solid radioactive waste processing systems to verify current system configuration/operation agree with the descriptions contained in the UFSAR and in the PCP.
 - Documentation describing the status of any radioactive waste process equipment that is not operational and/or is abandoned in place.

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- 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 radioactive materials and radioactive waste as specified by 49 CFR 172.

71151: Performance Indicator (PI) Verification

- Monthly PI reports since January 1, 2010, and copies of associated condition reports for any RETS/ODCM Radiological Effluent occurrences.
- Liquid and gaseous effluent release permits which specify the monthly, quarterly, and annual curies released by isotope and associated public dose assessments since January 1, 2010.
- List of all corrective action documents since January 1, 2010, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, etc.
- List of all electronic dosimeter (ED) dose rate alarms > 1 R/hr and all ED dose alarms since March 2010.

Inspector Contact Information:

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