



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

August 31, 2011

Mr. T. Preston Gillespie, Jr.
Site Vice President
Duke Energy Carolinas, LLC
Oconee Nuclear Station
7800 Rochester Highway
Seneca, SC 29672

**SUBJECT: OCONEE NUCLEAR STATION - NOTIFICATION OF INSPECTION AND
REQUEST FOR INFORMATION**

Dear Mr. Gillespie:

From October 24 – 28, 2011, and November 14 - 18, 2011, the NRC will perform a baseline Occupational and Public Radiation Safety inspection at the Oconee Nuclear Station, (NRC 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; 71124.08, Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation; 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). 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 Judy Smith (864-885-4309) of your organization. The inspector has requested that the subject material be made available to the NRC staff by October 10, 2011. Our inspection dates are subject to change based on your updated schedule of outage activities. If there are any questions about this inspection or the material requested, please contact the lead inspector Wade Loo at (404) 997-4727 or by email wade.loo@nrc.gov.

DPC

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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.: 50-269, 50-270, 50-287
License Nos.: DPR-38, DPR-47, DPR-55

Enclosure:
Pre-Inspection Document Request

cc w/encl.: (See page 3)

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Division of Reactor Safety

Docket Nos.: 50-269, 270, 287
License Nos.: DPR-38, DPR-47, DPR-55

Enclosure:
Pre-Inspection Document Request

cc w/encl.: (See page 3)

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OFFICE	DRS	DRS					
SIGNATURE	RA	RA					
NAME	W. LOO	B. BONSER					
DATE	08/29/2011	08/30/2011					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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Pre-Inspection Document Request

Occupational and Public Radiation Safety Cornerstone

Licensee: Oconee Nuclear Station
Docket Numbers: 50-269, 270, and 287
Inspection Dates: October 24 – 28, 2011, and November 14 - 18, 2011

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

Documentation is requested from November, 2009, to the present for IPs 71124.02, 71124.03, 71124.04, and 71124.08; May, 2010, to the present for IP 71124.01; and August 2010, for IP 71151.

We would prefer as much of the information as possible in electronic form. An index to the CD or shared drive 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 Wade Loo at 404-997-4727. Thank you in advance for all of your efforts 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.

Enclosure

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.
- Electronic copy of applicable chapters of UFSAR (e.g. radiation protection program, liquid and solid radioactive waste program, etc.).
- 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.
- 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 the last inspection that encompass the areas of (1) access controls, (2) the ALARA program and implementation, (3) liquid and solid radwaste processing, (4) dosimetry, (5) respiratory protection, and (6) transportation of radioactive material/radwaste.
- 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 cask loading activities.
- Environmental monitoring results (e.g. TLDs).
- Radiological records for the loading of casks since the last inspection.
- 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.

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.
- 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 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 (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

- Procedures related to occupational dose assessment (e.g. external dose monitoring, dosimetry issuance and use, guidance for multi-badging, personnel contamination events, storage/care of personal dosimeters, use of electronic dosimeters, *in-vivo* and *in-vitro* internal dose assessment, QC for whole body counter, use of passive monitoring if applicable, declared pregnant workers).

- NVLAP accreditation documentation for current dosimetry used by site.
- LIST of all positive whole body counts, in vitro, or air-sampling analyses which resulted in an assigned CEDE equal to or exceeding 10 millirem since January 2010. [Note: only a listing should be provided without names 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 identified since January 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. If the list cannot be provided without personally identifiable information, please omit it from the CD and provide it separately on paper after we arrive on site.].
- All audits and self-assessments of the dosimetry program (including audits of the lab that processes site dosimetry) since January 2010.
- LIST of PIPs generated since January 2010, for internal or external dosimetry issues/events. This should be a list of corrective action documents containing a PIP number and brief description, not full PIPs.

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 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
 - 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 August 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 August 2010.
- List of all corrective action documents since August 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 August 2010.

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)

- Provide inventory NSTS records of nationally tracked sources, including radionuclide quantities, make, model number and serial number for each.
- Provide records of leak tests and required maintenance, as applicable, for the NSTS listed devices. Records should go back to January 1, 2008, or receipt of subject source(s).
- Provide records of any transfer of NSTS devices.