



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**

REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET, SW, SUITE 23T85  
ATLANTA, GEORGIA 30303-8931

March 12, 2008

Mr. J. R. Morris  
Site Vice President  
Duke Power Company, LLC d/b/a Duke Energy Carolinas, LLC  
Catawba Site  
4800 Concord Road  
York, SC 29745-9635

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

Dear Mr. Morris:

On May 12-16 and June 2-6, 2008, the NRC will perform the baseline Occupational Radiation Safety Inspection at the Catawba Nuclear Station (NRC Inspection Procedures 71121.01, 71121.02, and 71122.02 and the radiation safety sections of 71151 and 60855). 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. The lead inspector has scheduled a three-day pre-inspection visit with your staff for April 21-23, 2008. The material requested will be reviewed and collected at that time.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Marc Sawicki of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Heather Gepford, at (404) 562-4659, or the Plant Support Branch 1 Chief, Brian Bonser, at (404) 562-4653.

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).

Should you have any questions concerning this letter, please contact us.

Sincerely,

**/RA/**

Brian R. Bonser, Chief  
Plant Support Branch 2  
Division of Reactor Safety

Docket No. 50-413, 50-414

License No. NPF-35 and NPF-52

Enclosure: Pre-Inspection Document Request

(cc: w/encl See Page 3)

March 12, 2008

Mr. J. R. Morris  
Site Vice President  
Duke Power Company, LLC d/b/a Duke Energy Carolinas, LLC  
Catawba Site  
4800 Concord Road  
York, SC 29745-9635

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

Dear Mr. Morris:

On May 12-16 and June 2-6, 2008, the NRC will perform the baseline Occupational Radiation Safety Inspection at the Catawba Nuclear Station (NRC Inspection Procedures 71121.01, 71121.02, and 71122.02 and the radiation safety sections of 71151 and 60855). 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. The lead inspector has scheduled a three-day pre-inspection visit with your staff for April 21-23, 2008. The material requested will be reviewed and collected at that time.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Marc Sawicki of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Heather Gepford, at (404) 562-4659, or the Plant Support Branch 1 Chief, Brian Bonser, at (404) 562-4653.

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).

Should you have any questions concerning this letter, please contact us.

Sincerely,

**/RA/**  
 Brian R. Bonser, Chief  
 Plant Support Branch 2  
 Division of Reactor Safety

Docket No. 50-413, 50-414  
 License No. NPF-35 and NPF-52

Enclosure: Pre-Inspection Document Request

(cc: w/encl See Page 3)

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE

ADAMS: XYes      ACCESSION NUMBER: \_\_\_\_\_

OFFICE	RII:DRS	RII:DRS											
SIGNATURE	<b>/RA/</b>	<b>/RA/</b>											
NAME	B. Bonser	h. Gepford											
DATE	03/12/2008	03/07/2008											
E-MAIL COPY?	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO

cc w/encl:  
Randy D. Hart  
Regulatory Compliance Manager  
Duke Power Company, LLC d/b/a Duke  
Energy Carolinas, LLC  
Electronic Mail Distribution

George Strickland  
Engineer  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

Kay Nicholson  
Technical Specialist  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

Allison Jones-Young  
Engineer  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

Anthony Jackson  
Engineer  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

Lawrence Rudy  
Engineer  
Catawba Nuclear Station  
4800 Concord Road  
York, SC 29745

Lisa F. Vaughn  
Associate General Counsel  
Duke Energy Corporation  
526 South Church Street-EC07H  
Charlotte, NC 28202

Kathryn B. Nolan  
Senior Counsel  
Duke Energy Corporation  
526 South Church Street-EC07H  
Charlotte, NC 28202

David A. Repka  
Winston Strawn LLP  
Electronic Mail Distribution

Henry J. Porter  
Assistant Director  
Division of Radioactive Waste Mgmt.  
S.C. Department of Health and  
Environmental Control  
Electronic Mail Distribution

Elizabeth McMahon  
Assistant Attorney General  
S.C. Attorney General's Office  
Electronic Mail Distribution

Vanessa Quinn  
Federal Emergency Management Agency  
Electronic Mail Distribution

Peggy Force  
Assistant Attorney General  
State of North Carolina  
Electronic Mail Distribution

R. L. Gill, Jr.  
Manager  
Nuclear Regulatory Issues and Industry  
Affairs  
Duke Power Company, LLC d/b/a Duke  
Energy Carolinas, LLC  
526 South Church Street  
Charlotte, NC 28201-0006

Dhiaa M. Jamil  
Group Executive and Chief Nuclear Officer  
Duke Energy Carolinas, LLC  
P.O. Box 1006 - EC03XM  
526 South Church St.  
Charlotte, NC 28201-1006

## **Pre-Inspection Document Request**

Occupational Radiation Safety Cornerstone

Licensee: Catawba Nuclear Station  
Docket Numbers: 50-413,414  
Inspection Dates: May 12-16 and June 2-6, 2008

Inspection Procedures to be performed:

71121.01	Access Controls to Radiologically Significant Areas
71121.02	ALARA Planning and Controls
71122.01	Radioactive Gases and Liquid Effluent Treatment & Monitoring Systems [limited scope, Sections 02.01(e), 2.02 (d & e)]
71122.02	Radioactive Material Processing and Transportation
71151	Performance Indicator Verification
60855	Operation of an ISFSI (RP aspects)

The most recent inspection completed for inspection procedures 71121.01, 71122.01, 71151, and 60855 was performed on August 6-10, 2007. The most recent inspection completed for inspection procedures 71121.01 and 71122.02 was completed December 1, 2006. Unless otherwise specified, documentation is requested from the date of the previous inspection to the present.

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 during the bagman trip, simply indicate that the requested material is available for onsite review by the inspectors.

If you have any questions, please call Heather Gepford at 404-562-4659. Thank you in advance for all your effort in putting together this material.

---

### Assistance Requested During Bagman Trip

- Introductions to, and discussions with, licensee personnel who will be assisting with the inspection
- Plant familiarization "tour"
- Walk-down of the ISFSI
- Discussion of groundwater monitoring program with cognizant personnel

### 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.
- Discussions with appropriate individuals regarding access controls and ALARA planning.

Enclosure

- Schedule of transportation shipments during the inspection and notification of opportunities for observations of shipment preparation/receipt; discussions with appropriate individuals regarding the transportation program.

### 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
- Corrective Action Program procedures
- 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, and (4) transportation of radioactive material/radwaste.

### 71122.01 Radioactive Gases and Liquid Effluent Treatment & Monitoring Systems

- Procedures for onsite/offsite surface/groundwater monitoring activities and leak detection
- Summary of spill, leak, or unexpected liquid discharge data documented in the site's 10 CFR 50.75(g) files. *Note: Only provide summary, 50.75(g) file details may be reviewed during onsite inspection.*
- List of PIPs issued since August 2007 for tritium or other radioisotopes in ground water wells, or identification of spills or leaks from contaminated systems, structures, and components.
- Audits and self assessments conducted since August 2007 for groundwater monitoring.
- Annual Effluent/REMP Reports for CY 2007: focus on surface and groundwater monitoring.

### 71121.01 Access Controls to Radiologically Significant Areas

- 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
  - ▶ Dosimetry monitoring (electronic dosimeters, multi-badging, etc.)
  - ▶ Calculations of internal exposures
- 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.
  - RWPs for the top five dose rate areas or tasks.
  - Plant/elevation maps of all HRAs, LHRAs, HDR-HRAs (>25 rem in one hour @ 30 cm), and VHRAs. Include areas with the potential to become a HRA during routine operations or outages.
  - Internal dose assessments, including calculations, for any internal exposures greater than 50 mrem CEDE since the last inspection.
  - List of all PCEs, including skin dose assessment if applicable, since the last inspection.
  - List of PIPs 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

#### 71121.02: 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

- ALARA documents related to current outage:
- 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 planning packages for the five highest dose jobs being performed during the outage
  - ▶ Temporary shielding requests generated for the outage.
- ALARA documents related to previous 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 of five activities in which the estimated and actual hours expended were accurate.
- Documents related to the ALARA planning process:
  - ▶ Annual ALARA goals for 2006-2008, previous/current outage ALARA goals, and the methodology utilized to make the projections.
  - ▶ Most recent annual ALARA report and most recent refueling outage report.
  - ▶ 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.
- 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 of the ALARA program
- Records for declared pregnant workers since November 2006, listing their monthly radiation exposure during the term or year-to-date.
- List of PIPs generated since November 2006 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

### 71122.02 Radioactive Material Processing 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 November 2006 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 PIPs generated since November 2006 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.

Enclosure

- ▶ 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 Verification

- Procedure(s) for identifying, notification, tracking, and correcting PI occurrences.
- List of all PIPs since August 2007 using keywords: HRA, LHRA, VHRA, unintended dose, unlocked door, offsite dose, ODCM, etc.
- Monthly PI reports since August 2007 and copies of associated corrective action reports for Occupational Exposure Control Effectiveness and RETS/ODCM Radiological Effluent Occurrences.
- List of all dose rate alarms > 1 R/hr and all dose alarms since August 2007.
- All final release point effluent monitor out-of-service dates since August 2007.
- Most recent gaseous and liquid effluent release permits.

#### 60855 Operation of an ISFSI

- 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 August 2007.
- 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 August 2007.
- Records of contamination incidents since August 2007.
- List of PIPs related to the ISFSI with respect to radiation protection (i.e. access controls, ALARA, contamination, radiation levels, etc.) since August 2007.

#### Inspector Contact Information:

Heather Gepford, Ph.D., CHP  
 (404) 562-4659  
 Heather.Gepford@nrc.gov

#### Mailing Address

US NRC Region II  
 ATTN: Heather Gepford  
 61 Forsyth Street, SW  
 Suite 23T85  
 Atlanta, GA 30303-3415