



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

March 20, 2014

Mr. Kelvin Henderson
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745

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

Dear Mr. Henderson:

During the weeks of May 19 – 23 and June 2 - 6, 2014, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at Catawba Nuclear Station Units 1 and 2 (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and 71151). 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 activity. The NRC requests that these documents be provided to the inspectors no later than May 2, 2014.

We have discussed the schedule for these inspection activities with your staff and understand that our regulatory contact for this inspection will be Paul Simbrat. If there are any questions about this inspection, or the material requested, please contact the lead inspector, Jonathan Rivera at 404-997-4646, or the Plant Support Branch 1 Chief, Brian Bonser at 404-997-4653.

In accordance with Title 10 of the *Code of Federal Regulations* (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 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>.

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, 3150-0044, and 3150-0135. 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.

Sincerely,

/RA/

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

Docket Nos. 50-413 and 50-414
License Nos. NPF-35 and NPF-52

Enclosure:
Document Request List

cc: Distribution via Listserv

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.

Sincerely,

/RA/

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

Docket Nos. 50-413 and 50-414
License Nos. NPF-35 and NPF-52

Enclosure:
Document Request List

cc: Distribution via Listserv

DISTRIBUTION:

G. McCoy, RII, DRP
C. Rapp, RII, SR PE
A. Ruh, RII, PE
A. Hutto, RII, SRI
R. Cureton, RII, RI
C. Evans, RII, EICS
L. Douglas, RII, EICS
RIDSNNRRDIRS
PUBLIC
A. Adams, NRR
RidsNrrPMCatawba Resource

☒ PUBLICLY AVAILABLE

☐ NON-PUBLICLY AVAILABLE

☐ SENSITIVE

☒ NON-SENSITIVE

ADAMS: ☒ Yes ACCESSION NUMBER: ML14080A095

☒ SUNSI REVIEW COMPLETE

☒ FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1					
SIGNATURE	JXR1	BRB1					
NAME	J. Rivera	B. Bonser					
DATE	03/ 19 /2014	03/ 20 /2014					
E-MAIL COPY	YES NO	YES NO					

OFFICIAL RECORD COPY

Document Request List

Inspection Dates: May 19 – 23 and June 2 – 6, 2014

Documents Due to Region II by: May 2, 2014

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
	71124.05	Radiation Monitoring Instrumentation
	71151	Performance Indicator Verification

Lead Inspector: Jonathan Rivera
Health Physicist
US NRC Region II
404-997-4646
Jonathan.Rivera@nrc.gov

Note: The current version of these documents is expected unless specified otherwise. Electronic media is preferred if readily available. *[Note that the inspectors cannot accept data provided on USB or “flash” drives due to NRC IT security policies.]* Please organize the information as it is arranged below to the extent possible. Experience has shown that a poorly organized CD leads to a less efficient inspection and places additional burden on licensee staff. Pay particular attention to the date ranges for the items requested as they may change from item to item. If there are questions regarding the documents requested, or if the documents cannot be provided by the due date, please do not hesitate to contact the lead inspector.

Miscellaneous

- List of primary contacts for each inspection area w/phone numbers.
- Radiation Protection organizational chart.
- List of Site and Corporate radiation protection procedures.
- Electronic copy of applicable chapters of Updated Final Safety Analysis Report (UFSAR) (e.g., radiation protection program, liquid and solid radioactive waste program, etc.).
- Corrective Action Program (CAP) procedures.
- Procedures associated with the Independent Spent Fuel Storage Installations (ISFSI) facility. Procedures should include:
 - Radiological surveys, postings, and radiation control barricades
 - Environmental monitoring, including Thermoluminescent Dosimeters (TLDs)

Enclosure

- Loading of casks
- Routine activities
- Radiation surveys of the ISFSI since the last inspection.
- List of corrective action reports related to the ISFSI with respect to radiation protection (i.e., access controls, As Low As Reasonably Achievable (ALARA), contamination, radiation levels, etc.) since the last inspection.
- ALARA reviews and planning and associated Radiation Work Permits (RWPs) for cask loading activities.
- Records of contamination incidents since the last inspection.
- Audits and self-assessments performed since the last inspection that encompass the areas of (1) Access Control, (2) ALARA program and implementation, (3) dosimetry, (4) respiratory protection, and (5) radiation monitoring instrumentation.
- Outage schedule to include work activities that will be conducted during the weeks of the inspection.
- List of active RWPs with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
- Procedures for identifying, notification, tracking, and correcting Performance Indicators (PIs) occurrences.
- List of all PIs, and copies of associated corrective action reports for Occupational Exposure Control Effectiveness and Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) Radiological Effluent Occurrences.

Assistance Requested During OnSite 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 walkdowns assessing access controls (e.g., verifying the posting and locking of entrances to High Dose Rate-High Radiation Areas (HDR-HRA) and Very High Radiation Areas (VHRA), and spent fuel pool controls.
- Health physics (HP) assistance in plant walkdowns/job coverage of ongoing outage activities to assess access controls and ALARA practices.
- Discussions with appropriate individuals regarding access controls and ALARA planning.

71124.01 Radiological Hazard Assessment and Exposure Controls

- List of outage RWPs
- Timeline of major outage activities (e.g., Gantt chart or similar list).
- Procedures related to HP controls (e.g., Posting, labeling, surveys, RWPs, contamination control, HRA/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots, etc.).
- Procedures related to release of personnel and materials (e.g., release surveys, decontamination, guidance for alarm followup, etc.).
- List of Nationally Tracked Sources and any change-of-ownership transactions.
- Most recent sealed source inventory record.
- List of all non-fuel items stored in spent fuel pool.
- Most recent self-assessment or audit covering HP controls.
- LIST of problem investigative processes (PIPs) related to HP controls (e.g., radworker error, HP technician error, posting issues, HRA/LHRA/VHRA issues, survey problems, etc.) issued since September 2013. *[This should be a list of corrective action documents containing a PIP number and brief description, not full PIPs.]*

71124.02 As Low As Reasonably Achievable 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
 - RWP 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 2013 and 2014, 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 3 months, or three meetings, after the last refueling outage; and the 3 months or three 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 that had the greatest collective dose and/or presented significant radiological risk.

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 self-contained breathing apparatus (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 continuous air monitors (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 November 2012.
- List of corrective action reports generated since November 2012 involving radiation monitoring and protective equipment deficiencies; including the following:
 - CAMs
 - 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 (WBC), TLDs, electronic dosimeters, bioassays, declared pregnant workers, neutron monitoring, multi-badging, etc.).
- National Voluntary Laboratory Accreditation Program (NVLAP) accreditation for dosimetry used to monitor personnel.
- Last calibration of WBC equipment and copy of the analysis library.
- Two most recent calibrations for personnel contamination monitors (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 committed effective dose equivalent (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 CAP PIP reports generated since November 2012 involving internal and external dosimetry issues (e.g., adverse trends related to electronic dosimeters (EDs), occupational dose assessments, etc.).

71124.05 Radiation Monitoring Instrumentation

- Copies of the CY 2012, and CY 2013 Annual Radiological Effluent Release Reports (ARERRs) documents.
- 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 monitor (PCM), portal monitor (PM), and WBC equipment; for area radiation monitor (ARM) and 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 three to five 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 ARMs (Both Units)
- Copies of all audits, self-assessments, and/or reviews of area and personnel monitoring equipment, and portable radiation survey instruments generated since November 2012. 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 November 2012, 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 radiological controlled area (RCA).

71151 Performance Indicator Verification

- Procedure(s) for identifying, notification, tracking, and correcting PI occurrences.
- Monthly PI reports since January 2013 and copies of associated condition reports for any RETS/ODCM Radiological Effluent occurrences.
- Most recent liquid and gaseous permits showing year-to-date dose.
- List of all corrective action documents since January 2013 using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, RETS/ODCM, offsite dose, and effluent release, etc.
- List of all ED dose rate alarms > 1 R/hr and all ED dose alarms since January 2013.
- ARERRs 2012 and 2013.