



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**

245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

January 26, 2016

Mr. Steven D. Capps
Duke Energy Carolinas, LLC
McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078

**SUBJECT: WILLIAM B. McGUIRE NUCLEAR PLANT – NOTIFICATION OF INSPECTION
AND REQUEST FOR INFORMATION**

Dear Mr. Capps,

During the weeks of March 21, 2016, and April 4, 2016, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at the McGuire Nuclear Station (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05, and 71151).

Experience has shown that this inspection is resource-intensive for both the NRC inspectors and your staff. 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. 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 NRC requests that these documents be provided to the inspectors no later than March 4, 2016.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Brian Richards, Licensing Specialist, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Carmen Dykes at 404-997-4401, 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, "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 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 by Robert Kellner Acting for/

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

Docket Nos. 50-369 and 50-370
License Nos. NPF-9 and NPF-17

Enclosure:
Pre-Inspection Document Request

cc: Distribution via Listserv

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Docket Nos. 50-369 and 50-370
 License Nos. NPF-9 and NPF-17

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PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: ML16026A591 SUNSI REVIEW COMPLETE FORM 665 ATTACHED

OFFICE	RII:DRS/PSB1	RII:DRS/PSB1					
SIGNATURE	CMD4	RXK3 for BRB1					
NAME	C. Dykes	B. Bonser					
DATE	1/ 26 /2016	1/ 26 /2016					
E-MAIL COPY	YES NO	YES NO					

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Pre-Inspection Document Request

Inspection Dates: March 21–25, 2016 and April 4–8, 2016

Documents Due to Region II by: February 29, 2016

Inspection Procedures (IPs):

- IP 71124.01 Radiological Hazard Assessment and Exposure Controls
- IP 71124.02 Occupational As Low As Reasonably Achievable Planning and Controls
- IP 71124.03 In-plant Airborne Radioactivity Control and Mitigation
- IP 71124.04 Occupational Dose Assessment
- IP 71124.05 Radiation Monitoring Instrumentation
- IP 71151 Performance Indicator Verification

Lead Inspector:

Carmen Dykes
Health Physicist
U.S. NRC Region II
404-997-4401
Carmen.dykes@nrc.gov

Note: This is a broad list of the documents the NRC inspectors will be interested in obtaining and reviewing prior to the onsite 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.

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 onsite review.

If you have any questions, please call Carmen Dykes at 404-997-4401. Thank you in advance for all of your effort in putting together this material.

General Information

1. List of primary site contact(s) for each inspection area including name(s) and telephone numbers.
2. List of radiation protection procedures, including title and number.
3. Corrective action program (CAP) procedure(s).

Enclosure

71124.01 - Radiological Hazard Assessment and Exposure Controls

(Last Inspected September 2015)

1. List of outage Radiation Work Permits (RWPs).
2. Timeline of major outage activities (e.g., Gantt chart or similar list).
3. Procedures related to health physics (HP) controls (e.g., Posting, labeling, surveys, RWPs, contamination control, high radiation area (HRA)/locked high radiation area (LHRA)/very high radiation area (VHRA) control, key control).
4. Procedures related to release of personnel and materials (e.g., release surveys, decontamination, and guidance for alarm followup).
5. List of locations, or plant maps indicating the location, of all LHRA and VHRA. Include areas with the potential to become a LHRA during routine operations or outages.
6. List of the 10 most exposure-significant work areas within radiation areas, HRAs (<1R/hr), or airborne radioactivity areas in the plant. This may include areas with low dose rates but high collective dose. Identify any HRAs with significant dose gradients (factor of five or more), including underwater diving activities.
7. Independent spent fuel storage installation information to include surveys, exposure data, as low as reasonably achievable (ALARA) planning and reviews conducted for the last two moves. Also, the last two routine surveys of the facility and any Thermoluminescent Dosimeter area monitoring results of the facility.
8. List of Nationally Tracked Sources, change of ownership and copies of any National Source Tracking System transaction documentation (e.g., annual reconciliation).
9. Most recent sealed source inventory record.
10. List of all non-fuel items stored in spent fuel pool.
11. All self-assessments or audits covering radiological hazard assessment and exposure controls/HP controls since September 2015 (if none, then provide the two most recent).
12. List of CAP nonconformance reports (NCRs, Action Requests (ARs), Condition Reports (CRs), etc.) related to HP controls (i.e., radworker error, HP technician error, posting issues, Nationally Tracked Sources issue, HRA/LHRA/VHRA issues, survey problems) issued since September 2015. This should be a list of corrective action documents containing an (AR, CR, NCR, etc.) number and brief description, not full documents.

71124.02 - Occupational As Low As Reasonably Achievable Planning and Controls

(Last Inspected September 2014)

1. All procedures related to ALARA (e.g., temporary shielding, ALARA planning, source term reduction).
2. List of top five dose jobs for the upcoming refueling outage and ALARA planning packages (including dose estimates, work-hour estimates, special HP controls, and dose reduction initiatives).
3. ALARA trending point data for last two outages.
4. Source term reduction strategic plan, if available.
5. Minutes from the last four Plant ALARA Committee Meetings.
6. Most recent self-assessment or audit of ALARA program.
7. 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.

8. List of CAP nonconformance reports (NCRs, ARs, CRs, etc.) related to ALARA issues since October 2014. This should be a list of corrective action documents containing an (AR, CR, NCR, etc.) number and brief description, not full documents

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

(Last Inspected September 2014)

1. Procedures related to airborne monitoring and control (e.g., use of purge systems, use of portable HEPA/charcoal units, temporary ventilation enclosures, use of continuous air monitors (CAMs), air sampling guidance, Alpha air sampling).
2. Procedures related to the use of respiratory protection devices (e.g., self-contained breathing apparatus (SCBA), total effective dose equivalent-ALARA guidance, powered air purifying respirators (PAPRs), storage, maintenance, training, quality assurance (QA), fit-testing).
3. Two most recent HEPA filter DOP and charcoal test for the following ventilation systems;
 - a. Main control room
 - b. Unit 1 Auxiliary Ventilation Exhaust
4. The last two grade D air testing certificates for each supplied air system and SCBA filling station.
5. Documentation for last two surveillances performed on SCBA stored for emergency use.
6. Most recent audit or self-assessment covering airborne controls and respiratory protection.
7. List of NCRs related to airborne monitoring and respiratory protection since October 2014. *[This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.]*
8. Available for onsite review by inspector during inspection
 - a. Inventory, inspection and maintenance records for SCBA equipment
 - b. Training records, including fit tests, for SCBA qualified individuals
 - i. List of all licensed operators qualified to use SCBA
 - ii. List of all instrumentation and control personnel qualified to use SCBA
 - iii. List of all HP personnel qualified to use SCBA
 - c. Vendor training certificates for all onsite individuals qualified to repair SCBA

71124.04 – Occupational Dose Assessment

(Last Inspected September 2014)

1. Procedures related to occupational dose assessment including by not limited too:
 - a. external dose monitoring
 - b. dosimetry issuance and use
 - c. unusual dosimetry occurrences
 - d. multi-badging/extremity dosimetry/badge relocation
 - e. Effective Dose Equivalent, personnel contamination events (PCEs)
 - f. storage/care of personal dosimeters
 - g. use of electronic dosimeters (EDs)
 - h. *in-vivo* and *in-vitro* internal dose assessment
 - i. skin dose assessment
 - j. quality control for whole body counter (WBC)
 - k. use of passive monitoring
 - l. declared pregnant workers

2. National Voluntary Laboratory Accreditation Program accreditation documentation for current dosimetry used by site.
3. List of all positive air-sampling, whole body counts, or *in vitro* analyses, which resulted in an assigned committed effective dose equivalent equal to or exceeding 10 millirem since October 1, 2014. (*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.*)
4. List of all PCEs identified since October 1, 2014. Include full documentation for any PCEs requiring skin dose assessment. (*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; however, please include full dose assessment documentation as applicable.*)
5. Most recent audit or self-assessment of the dosimetry program, and the most recent audit of the lab that processes site dosimetry.
6. List of CR documents generated since October 1, 2014, for internal or external dosimetry issues/events. (*This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.*)

71124.05 - Radiation Monitoring Instrumentation

(Last Inspected September 2014)

1. Procedures/Guidance Documents for:
 - a. Calibration and functional test/source checks of portable radiation detection instruments
 - b. Calibration and functional tests of small article monitor (SAM), personnel contamination monitor (PCM), portal monitor (PM), WBC equipment, and continuous air monitors (CAMs)
 - c. Collection and analysis of high-range, post-accident effluent samples
 - d. Determination of set-points for area radiation monitor, CAM, PCM, PM, and SAM equipment used for area and personnel monitoring equipment
 - e. QA program for count room instruments
2. The last two calibration records for each of the following instruments:
 - a. Containment High Range Area Monitors (both units)
 - b. Auxiliary Building Ventilation Monitor
 - c. Control Room Ventilation Monitors
 - d. Units 1 & 2 Vent Airborne Monitor
3. Documentation for the radioactive sources used to calibrate the instruments in item 2 above. Also include paperwork showing traceability to a National Institute of Standards & Technology standard and/or traceability to the primary calibration, as applicable
4. 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.]
5. Design documents and/or calculations showing how the alarm setpoints for the following instruments are determined:
 - a. PMs at radiological controlled area (RCA) exit point
 - b. CAMs
6. Chart or procedure listing emergency action levels associated with radiation monitors (if applicable).
7. The latest test record of the instrument calibrator (Shepherd validation testing/dose rate curves).
8. Latest system health report for the Radiation Monitoring system.

9. Most recent audit or self-assessment covering HP instruments (portables, RCA exit point, WBC, count room). Include any reviews conducted of vendor facilities, as applicable.
10. List of CR documents generated October 1, 2014, related to portable instruments, effluent and area monitors, CAMs, RCA release point monitors, WBCs, and count room instruments. *[This should be a list of corrective action documents containing an AR number and brief description, not full NCRs.]*

71151 Performance Indicator Verification

(Last Inspected June 2015)

1. Procedure(s) for identifying, notification, tracking, and correcting performance indicator (PI) occurrences.
2. Monthly PI reports since June 2015 and copies of associated **condition reports** for any Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual (RETS/ODCM) Radiological Effluent occurrences.
3. Liquid and gaseous effluent release permits since June 2015, which specify the quarterly and annual curies released by isotope and associated public dose assessments.
4. List of all CAP documents since June 2015 using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, RETS/ODCM, abnormal or unmonitored release, offsite dose, and effluent release, etc.
5. List of all ED dose rate alarms and all ED dose alarms since June 2015.
6. Annual Radiological Effluent Release Reports 2013 and 2014.
7. Audit and self-assessment documents generated since June 2015 related to PIs or last assessment.

LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable	PCM	Personnel Contamination Monitor
ARs	Action Requests	PIs	Performance Indicators
CAMs	Continuous Air Monitors	PM	Portal Monitor
CAP	Corrective Action Program	QA	Quality Assurance
CRs	Condition Reports	RCA	Radiological Controlled Area
EDs	Electronic Dosimeters	RETS	Radiological Effluent Technical Specifications
HP	Health Physics		
HRA	High Radiation Area	RWPs	Radiation Work Permits
LHRA	Locked High Radiation Area	SAM	Small Article Monitor
NCRs	Nonconformance Reports	SCBA	Self-contained Breathing Apparatus
ODCM	Offsite Dose Calculation Manual	VHRA	Very High Radiation Area
PCEs	Personnel Containment Events	WBC	Whole Body Counter