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

March 8, 2017

Mr. George Lippard III, Vice President
Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88, Mail Code 800
Jenkinsville, SC 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NOTIFICATION OF RADIATION PROTECTION BASELINE INSPECTION AND REQUEST FOR INFORMATION

Dear Mr. Lippard:

During the weeks of April 17, 2017 and May 15, 2017, the U.S. Nuclear Regulatory Commission (NRC) will perform a baseline Radiation Safety Inspection at the Farley Nuclear Plant (NRC Inspection Procedures 71124.01, 71124.02, 71124.03, 71124.04, 71124.05 and Radiation Safety Sections of 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 April 10, 2017.

We have discussed the schedule for these inspection activities with your staff, and understand that our regulatory contact for this inspection will be Ms. Susan Reese, 803-345-4591, of your organization. If there are any questions about this inspection or the material requested, please contact the lead inspector, Bill Pursley at 404-997-4517, 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 3150-0044, 3150-0135, 3150-0014, 3150-0011, and 3150-0008. 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 No. 50-395
License No. NPF-12

Enclosure
Pre-Inspection Document Request

cc: Distribution via Listserv

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NOTIFICATION OF RADIATION PROTECTION BASELINE INSPECTION AND REQUEST FOR INFORMATION

Distribution:
W. Pursley, DRS
B. Bonser, DRS
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NAME	WPURSLEY	BBONSER					
DATE	3/8/2017	3/8/2017					
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DRSII\PSB1\RFI INFORMATION REQUEST LETTERS\SUMMER\2017\SUM 2017-002 RP RFI.DOCX

Document Request List

Inspection Dates: April 17 - 21 and May 15 – 19, 2017

Documents Due to Region II by: April 10, 2017

Inspection Procedures (IPs):	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

Note: Unless specified otherwise, the current version of these documents is expected. Electronic media is preferred if readily available (The preferred file format is MSWord, or searchable ".pdf" files on CDROM). *Note that the inspectors cannot accept data provided on USB or "flash" drives due to NRC IT security policies.* To the extent possible, please organize the information in the order shown below. Experience has shown that a poorly organized CD leads to a less efficient inspection and places additional burden on licensee staff. If there are questions regarding the documents requested, please do not hesitate to contact the lead inspector.

Documentation for the inspection procedures from June 1, 2014 to the present is requested for all procedures, except 71124.01 and 71151 which should be from July 1, 2016 to present. This reflects the last time these areas were inspected. 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 William Pursley at (404) 997-4517. Thank you in advance for your effort in putting together this material.

General and Miscellaneous Information

- List of primary site contact(s) for each inspection area including name(s) and telephone numbers.
- List of radiation protection procedures, including title and number.
- Plant Management, Radiation Protection, and Chemistry organizational charts w/ contact numbers
- Outage schedule, including work activities to be conducted during the week(s) of the inspection
- Most recent 10 CFR Part 61 analytical results
- Corrective Action Program procedure(s)
- Audits and self-assessments performed since June 1, 2014 that encompass the areas of (1) the ALARA program and implementation, (2) respiratory protection, (3) airborne radioactivity, monitoring and/or mitigation-engineering controls, and (4) radiological monitoring instrumentation (portable, installed, and counting room instruments).

71124.01 - Radiological Hazard Assessment and Exposure Controls

1. List of active RWPs, including outage RWPs, with their administrative limits, electronic dosimeter dose rate limit, and dose limit.
2. List of locations, or plant maps indicating the location, of all LHRAs and VHRAs. Include areas with the potential to become a LHRA during routine operations or outages.
3. Most recent survey of all LHRAs and VHRAs (as applicable).
4. ISFSI 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 passive area monitoring results for the facility.
5. 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.).
6. Procedures related to release of personnel and materials (e.g. release surveys, decontamination, guidance for alarm follow up, etc.).
7. List of Nationally Tracked Sources, change of owner ship and copies of any NSTS transaction documentation (e.g., annual reconciliation).
8. Most recent sealed source inventory record.
9. List of all non-fuel items stored in spent fuel pool.
10. All self-assessments and audits covering HP controls since July 1, 2016.
11. List of condition reports (e.g. NCRs, CRs, ARs etc.) related to HP controls where the cause was listed as human performance (radworker error) or human performance (HP technician error) generated since July 1, 2016. *This should be a list of corrective action documents containing a CR number and brief description, not full CRs*.
12. A list of condition reports related to Nationally Tracked Sources since July 1, 2016.

71124.02 - ALARA Planning and Controls

1. 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
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). Please include all ALARA plans for the Rx Head replacement if available.
3. Most recent annual ALARA report and most recent refueling outage report.
4. Annual ALARA goals for 2015, 2016 and 2017, and the methodology utilized to make the projections.
5. ALARA Committee activity summaries (e.g. meeting minutes) discussing and approval of activities associated with the upcoming refueling outage.
6. 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 June 1, 2014.

7. List of Corrective Action non-conformance documents (condition reports e.g. NCRs, CRs, ARs etc.) generated since June 1, 2014, 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
8. Available for onsite review during the inspection:
   - ALARA planning packages for jobs to be performed during the outage
   - Temporary shielding requests generated for the 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

1. 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.)
   - 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)
   - Total Effective Dose Equivalent-ALARA evaluation guidance
   - 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
2. Surveillance procedures for and the most recent HEPA filter DOP and charcoal test results, if available, for the Auxiliary and Radwaste Area Ventilation System and Spent Fuel Pool Area Ventilation System.
3. Operational guidance (procedures, policies, etc) for the Rx Bldg purge system.
4. Records of certification of air quality for equipment used to provide breathing air for air-supplied respirators and SCBA bottles (air compressors and bottled breathing air) since June 1, 2014.
5. Documentation for last two surveillances performed on SCBA stored for emergency use.
   - List of condition reports (e.g. NCRs, CRs, ARs etc.) generated since June 1, 2014 involving radiation monitoring and protective equipment deficiencies, including CAMs, respiratory protection equipment and/or program implementation
6. 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
   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
- Training records/certification for individuals qualified to perform maintenance on vital components (e.g. regulators) on SCBA

71124.04: Occupational Dose Assessment

1. Site and corporate Procedures/Guidance Documents for external dose monitoring, i.e. dosimetry issuance and use. The documents should include:
   - Guidance for multi-badging
   - 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
2. National Voluntary Laboratory Accreditation Program (NVLAP) accreditation documentation for current dosimetry used by the site.
3. List of all individual positive WBC results, in vitro, or air sampling analyses which resulted in an assigned CEDE equal to, or exceeding, 10 millirem since June 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 personnel contamination events, dispersed contamination/discrete particles, identified since June 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].*
5. Copies of all audits, self-assessments, and/or reviews related to internal or external dosimetry issues generated since June 1, 2014. The documents provided should include any reviews/evaluations conducted of vendor facilities, e.g., corporate or outside vendor/ or corporate calibration facilities.
6. List of condition reports (e.g. NCRs, CRs, ARs etc.) generated since June 1, 2014, for internal or external dosimetry issues/events. *[Note: only titles and a summary statement should be provided for use by the inspectors to select a sample of issues for in-depth review]*.

71124.05 - Radiation Monitoring Instrumentation

1. Procedures/Guidance Documents for:
   - use of portable instrument calibrators (e.g. Shepherd calibrator)
   - 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), whole body counting (WBC) equipment; and continuous air monitors (CAMs)
   - determination of set-points for Area Radiation Monitor (ARM), CAM, PCM, PM and SAM equipment
   - collection and analysis of high-range, post- accident effluent samples
   - QA program for count room instruments (e.g. laboratory inter-comparison data)

2. The last two calibration records for Unit 1 Rx Bldg High Range monitors RM-G7 and RM-G18.
3. Current calibration records for RM-G8 & RM-G14.
4. Documentation for the radioactive sources used to calibrate the instruments in items 2 & 3 above, including paperwork showing traceability to a National Institute of Standards & Technology standard and/or traceability to the primary calibration, as applicable
5. The last two test records of the instrument calibrator (Shepherd validation testing/dose rate curves).
6. The last two records of calibration for the WBC.
7. List of the portable instruments currently in service and available for use. Several will be selected for on-site review of the calibration records.
8. List of the following radiation monitors currently in service. Several will be selected for on-site review of the calibration records.
   - Portal Monitors used in Dosimetry for Passive Monitoring
   - SAMs at RCA exit point
   - Whole Body Contamination Monitors at RCA exit point
   - Portal Monitors at RCA exit point
   - Countroom High-purity Germanium and liquid scintillation systems
9. Source certificates/documentation for the radioactive sources used to calibrate the monitors requested for item 8 above showing NIST traceability.
10. Chart or procedure listing any EAL value associated with installed or portable radiation monitoring instrument indication(s).
11. Latest system health report for the Radiation Monitoring system.
12. Copies of all audits, self-assessments, and/or reviews of area and personnel monitoring equipment and portable radiation survey instruments generated since June 1, 2014. The records should include any reviews conducted of vendor facilities, e.g., outside calibration laboratories, as applicable.
13. List of condition reports (e.g. NCRs, CRs, ARs etc.) generated since June 1, 2014, related to portable instruments, area radiation monitors, CAMs, WBCs, and count room instruments. *This should be a list of corrective action documents containing a CR number and brief description, not full CRs.*

71151 – Performance Indicator (PI) Verification

1. Site procedures/manuals for gathering and reporting PI data.
2. Monthly/Quarterly PI reports since July 1, 2016, and copies of associated corrective action reports for any RETS/ODCM Radiological Effluent occurrences.
3. List of all corrective action documents since July 1, 2016, using keywords such as: HRA, LHRA, VHRA, unintended dose, unlocked door, etc.
4. List of all electronic dosimeter (ED) dose rate alarms and ED dose alarms since July 1, 2016 which includes dose or dose rate alarm received, and the alarm setpoint(s).
5. List of condition reports (e.g. NCRs, CRs, ARs etc.) generated since July 1, 2016, using keywords abnormal/ unmonitored effluent release, etc.

Assistance Requested During On-Site Inspection

- Identification of work activities available during the inspection for inspector observations, including notification of pre-job briefings, notification of risk significant work activities, and audio/visual surveillance for remote job coverage

- HP assistance in plant walk-downs assessing access controls, e.g. verifying the posting and locking of entrances to LHRAs, VHRAs and SFP controls.
- HP assistance in plant walk-downs/job coverage of ongoing activities to assess access controls.
- Coordination of observations of source checks of fixed and portable instruments.

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