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August 1, 2013

U. S. Nuclear Regulatory Commission, Region II
Attn: Robert Kellner
245 Peachtree Center Avenue NE, Suite 1200
Atlanta, GA 30303-1257

Dear Mr. Kellner:

Subject: VIRGIL C. SUMMER NUCLEAR STATION UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
NRC REQUEST FOR INFORMATION
BASELINE RADIATION SAFETY INSPECTION

Reference: Brian R. Bonser, Chief, NRC Plant Support Branch 1, letter to Thomas D. Gatlin, June 7, 2013.

As requested in the referenced letter, South Carolina Electric & Gas Company hereby submits the requested information required to support the Virgil C. Summer Nuclear Station (VCSNS) baseline radiation safety inspection scheduled for August 26 through 30 and September 9 through 13, 2013. The requested items have been organized and provided on the enclosed disk.

Should you have any questions, please contact Susan Reese at (803) 345-4591.

Very truly yours,



Bruce L. Thompson

SBR/BLT/bq

Enclosure (1 Disk – VCSNS 2013 Baseline NRC Radiation Protection Inspection)

c: (without enclosure unless noted)

M. Coleman
Document Control Desk
NRC Resident Inspector
R. E. Martin

RTS (CR-13-02498)
File (815.01)
PRSF (RC-13-0111)

A001
NRR

Information Request
V. C. Summer Baseline Radiation Safety Inspection

Licensee: V.C. Summer Nuclear Station

Docket Number(s): 50-395

Inspection Dates: August 26-30 and September 9-13, 2013

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

General Information Request

- Telephone numbers of contacts for the identified inspection areas
- Radiation Protection organizational charts
- Electronic copy of applicable chapters of the Updated Final Safety Analysis Report (UFSAR). (e.g., radiation protection program, ventilation test program, area and process radiation monitors, etc.)
- Corrective Action Program (CAP) procedures.
- 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 July 1, 2011, that encompass the areas of (1) radiation protection, (2) access controls, (3) ALARA occupational dose assessment, (4) internal dosimetry, (5) external dosimetry, and (6) radiation monitoring instrumentation.
- List of radiation protection procedures.
- Procedure(s) for identifying, notification, tracking and correcting PI occurrences.
- 10 CFR 61.55 analysis results for dry active waste (DAW) and other waste streams.

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71124.01 – Radiological Hazard Assessment and Exposure Controls

- Site procedures related to HP controls. (e.g., Posting, labeling, surveys, RWPs, contamination control, JRA/LHRA/VHRA control, key control, control of divers, special controls during fuel offload, hot spots, etc.)
- List of current active RWPs.
- Site procedures related to release of personnel and materials. (e.g., release surveys, decontamination, guidance for alarm follow-up, etc.)
- List of Nationally Tracked Sources and any change-of-ownership transactions.
- Inventory list of all sealed sources stored onsite.
- List of all non-fuel items stored in spent fuel pool.
- Most recent self-assessment or audit covering hazard assessment and exposure controls.
- List of corrective action reports generated since October 2012 related to HP controls. (e.g., radworker error, HP technician error, posting issues, HRA/LHRA.VHRA issues, survey problems, etc.). *This should be a list of corrective action documents containing the corrective action document number and a brief description, not complete documents.*

71124.02 – Occupational ALARA Planning and Controls

- Site procedures associated with maintaining site dose ALARA, including those involving ALARA 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.
- Annual ALARA goals for 2011, 2012, and 2013, and the methodology utilized to make the projections.
- Completed ALARA packages (including post-job reviews) for the five highest collective dose work activities completed during the 2012 refueling outage (including dose estimates, work hour estimates, special HP controls, and dose reduction initiatives), if available.
- List of temporary shielding requests generated during the 2012 refueling outage.
- List of five activities (including ALARA package number) from the 2012 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 2012 outage in which the estimated work hours were significantly different than the actual hours expended.

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71124.02 – Occupational ALARA Planning and Controls continued...

- List five activities from the 2012 outage in which the estimated and actual hours expended were accurate.
- ALARA trending point data for the last two outages.
- Annual ALARA Report for 2011 and 2012.
- Source term reduction strategic plan, if available.
- Minutes from the last four Plant ALARA Committee Meetings.
- Post-outage ALARA report for the 2012 refueling outage.
- Most recent self-assessment or audit of ALARA program.
- List of corrective action reports generated since July 2011 related to ALARA. (e.g., 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). *This should be a list of corrective action documents containing the corrective action document number and a brief description, not complete documents.*
- Available for onsite review during the inspection: (Please do not provide any records which contain personally identifiable information such as social security number and name on the CD.)
 - 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 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. (e.g., regulators)
 - Determination/verification of Grade D air for SCBA.
- Site and corporate procedures/manuals related to airborne monitoring and control (e.g., use of containment purge, use of portable HEPA/charcoal units, temporary ventilation enclosures, use of CAMs, air sampling guidance, Alpha air sampling, etc.), as applicable.

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71124.03 – In-Plant Airborne Radioactivity Control and Mitigation continued...

- Site and corporate procedures/manuals related to the use of respiratory protection devices. (e.g., SCBA, TEDE-ALARA guidance, PAPRs, storage, maintenance, training, QA, fit-testing, etc.)
- Records of the last two calibrations/tests (charcoal, HEPA DOP, and system flow rate) for the following ventilation systems:
 - Control Room Ventilation
 - Fuel Handling Building Ventilation
 - Reactor Building Purge Ventilation
- List of corrective action reports generated since July 2011 related to airborne monitoring and respiratory protection. (e.g., continuous air monitors, respiratory protection equipment, and program implementation, etc.) *This should be a list of corrective action documents containing the corrective action document number and a brief description, not complete documents.*
- 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 procedures, manuals, and technical documents related to occupational dose assessment. The documents should include guidance for:
 - Multi-badging; monitoring in steep/highly variable dose rate gradients.
 - 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.
 - 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.
- NVLAP accreditation documentation for the current dosimetry used by the site.
- List of all positive whole body counts, *in vitro*, or air sampling analyses that resulted in an assigned CEDE equal to, or exceeding, 10 millirem since July 2011. *[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.]*

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71124.04 – Occupational Dose Assessment continued...

- List of all personnel contamination events identified since July 2011. 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.]*
- Most recent audit or self assessment of the dosimetry program and the most recent audit of the lab that processes site dosimetry.
- List of corrective action reports generated since July 2011 for internal or external dosimetry issues/events. *This should be a list of corrective action documents containing the corrective action document number and a brief description, not complete documents.*

71124.05 – Radiation Monitoring Instrumentation

- Site procedures/manuals associated with radiation monitoring instrumentation. Procedures/manuals should include:
 - 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 (SCAMs)
 - 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)
 - Maintenance or surveillance test guidance for the specific process and effluent Radiation Monitors (RM) requested below.
- The last two calibration records for the following monitors:
 - Containment High Range Radiation Monitors (RM-G7 and RM-G18)
 - Main Plant Vent Exhaust Monitor (RM-A3) and Associated Sample Line Flow Rate Monitor(s)
 - Main Plant Vent Exhaust High Range Gas Monitor (RM-A13)
 - Condenser Exhaust Radiation Monitor (RM-A9)
 - Liquid Radwaste Effluent Radiation Monitor (RM-L5)
 - Component Cooling Water Monitors (RM-L2A and RM-L2B)
 - Reactor Building Purge Exhaust Particulate and Noble gas monitors (RM-A4)
 - WBC systems in Dosimetry
- List of the portable instruments currently in service and available for use. Several will be selected for onsite review of the calibration records.

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71124.05 – Radiation Monitoring Instrumentation continued...

- List of the following radiation monitors. Several will be selected for onsite 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
 - Count Room High-Purity Germanium Detectors
- Documentation for the radioactive sources used to calibrate the above requested monitors showing traceability to a national standard (NIST) and traceability to the primary calibration, as applicable.
- The last two surveillances performed on the Post-Accident Sampling System, as applicable.
- Chart or procedure listing EALs for radiation monitoring equipment.
- The latest test record of the instrument calibrator (Shepherd validation testing/dose rate curves).
- Two most recent system health reports or Maintenance Rule reports for Radiation Monitoring systems (effluent and ARM).
- Most recent audit or self-assessment covering HP instruments (portables, RCA exit point, WBC, count room, effluent); include any reviews conducted of vendor facilities, as applicable.
- List of corrective actions reports generated since July 2011 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 the corrective action document number and a brief description, not complete documents.)*

71151 – Performance Indicator (PI) Verification (occupational and public cornerstones)

- Site procedures/manuals for gathering and reporting PI data.
- Monthly/Quarterly PI reports since September 1, 2012, and copies of associated Condition Report documents for any Occupational Exposure of RETS/ODCM Radiological Effluent PI events occurrences.
- Liquid and gaseous effluent release permits that specify the quarterly and annual curies released by isotope, and associated public dose assessments, for the fourth quarter CY 2012, and the most recent permits in 2013.
- List of all corrective action reports generated since September 1, 2012, using keywords such as HRA, LHRA, VHRA, unintended dose, unlocked LHRA door, etc.
- List of all corrective action reports generated since September 1, 2012, using keywords abnormal/unmonitored effluent release, etc.
- List of all electronic dosimeter (ED) dose rate alarms and ED dose alarms since September 1, 2012.