



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

November 10, 2021

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Company, Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1&2 – INTEGRATED
INSPECTION REPORT 05000424/2021003 AND 05000425/2021003

Dear Ms. Gayheart:

On September 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Vogtle Electric Generating Plant, Units 1&2. On October 22, 2021, the NRC inspectors discussed the results of this inspection with Mr. Jesse Thomas and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

A licensee-identified violation which was determined to be of very low safety significance is documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC Resident Inspector at Vogtle Electric Generating Plant, Units 1&2.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

C. Gayheart

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Sincerely

/RA/

Alan J. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 05000424 and 05000425
License Nos. NPF-68 and NPF-81

Enclosure: As stated

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SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1&2 – INTEGRATED
INSPECTION REPORT 05000424/2021003 AND 05000425/2021003 DATED
NOVEMBER 10, 2021

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DATE	10/27/2021	11/1/2021	10/28/2021	10/29/2021	
OFFICE	RII: DRP	RII: DCO	RII: DRP	RII/DRP	
NAME	N. Karlovich	T. Morrissey	M. Toth	A. Blamey	
DATE	11/1/2021	10/27/2021	11/03/2021	11/10/2021	

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000424 and 05000425

License Numbers: NPF-68 and NPF-81

Report Numbers: 05000424/2021003 and 05000425/2021003

Enterprise Identifier: I-2021-003-0011

Licensee: Southern Nuclear Company, Inc.

Facility: Vogtle Electric Generating Plant, Units 1&2

Location: Waynesboro, GA

Inspection Dates: July 01, 2021 to September 30, 2021

Inspectors: J. Diaz-Velez, Senior Health Physicist
C. Fontana, Emergency Preparedness Inspector
J. Hickman, Resident Inspector
N. Karlovich, Resident Inspector
M. Magyar, Reactor Inspector
D. Mas-Penaranda, Resident Inspector
T. Morrissey, Senior Construction Inspector
A. Nielsen, Senior Health Physicist
W. Pursley, Health Physicist
C. Safouri, Senior Resident Inspector
S. Sanchez, Senior Emergency Preparedness Inspector
R. Smith, Senior Resident Inspector
J. Walker, Emergency Response Inspector

Approved By: Alan J. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Vogtle Electric Generating Plant, Units 1&2, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. A licensee-identified non-cited violation is documented in report section: 71152.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period at rated thermal power (RTP). On September 12, 2021, the unit was shutdown for a refueling outage (1R23) and remained shutdown for the remainder of the inspection period.

Unit 2 began the inspection period at RTP. On August 18, 2021, the unit was down powered to 78 percent due to a sodium excursion. The unit was returned to RTP on August 23, 2021 and remained at or near RTP for the remainder of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident and regional inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week, increasing the amount of time on-site as local COVID-19 conditions permitted. As part of their on-site activities, resident inspectors conducted plant status activities as described in IMC 2515, Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities; and completed on-site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on-site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of tropical storm Elsa and seasonal hot weather, on July 6, 2021, for the following systems:
 - auxiliary feedwater (AFW)
 - emergency diesel generators (EDGs)

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 1 train B centrifugal charging pump (CCP) due to Unit 1 train A CCP out of service for maintenance, on July 14, 2021.
- (2) Unit 1 train B CCP during reduced inventory activities during the Unit 1 refueling outage, on September 14, 2021.
- (3) Unit 1 train B spent fuel pool cooling and purification system following unexpected lowering level in the spent fuel pool, on September 21, 2021.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Fire Zones 143/161/163, Unit 1 train A EDG and electrical tunnel to control building, on August 31, 2021.
- (2) Fire Zones 107/108/120/121, Unit 1 upper cable spreading room, on September 1, 2021.
- (3) Fire Zones 89/90/159/87/88/93/102/158, Unit 2 level A east and west penetration areas, on September 1, 2021.
- (4) Fire Zones 60/61/64/62/63/82, Unit 2 level B east and west penetration areas, on September 1, 2021.
- (5) Fire Zones 36/37, Unit 2 level A, train A and B component cooling water (CCW) rooms, on September 24, 2021.

71111.08P - Inservice Inspection Activities (PWR)

PWR Inservice Inspection Activities Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated pressurized water reactor non-destructive testing by reviewing the following examinations from September 12 - 30, 2021:
 1. Ultrasonic Testing
 - a. V1 11201-V6-002-W12, Upper Head to 6" Safety Nozzle Weld, ASME Class 1 (reviewed)
 - b. V1 11201-053-4-RB, 16" Pipe to Reducer, ASME Class 1 (reviewed)
 2. Magnetic Particle Testing
 - a. V1 11201-V6-002-W12, Upper Head to 6" Safety Nozzle Weld, ASME Class 1 (reviewed)
 3. Visual Examination (VT)
 - a. Reactor vessel closure head outer surface, Bare metal visual exam (reviewed)
 4. Eddy Current Examination
 - a. Steam Generator 2: ET for tube R42C76 and R50C84

- b. Steam Generator 3: ET for tube R41C102
- c. Steam Generator 4: ET for tube R14C82 and R16C56

The Inspectors evaluated the licensee's boric acid corrosion control program performance.

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the control room during Unit 1 main feedwater regulation valve (MFRV) malfunction, on July 7, 2021.

Licensed Operator Regualification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed and evaluated a simulator scenario consisting of loss of coolant accident with loss of barriers on July 20, 2021.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) Unit 1 Class 1E 480 VAC, system 1805, (a)(1) evaluation, on August 2, 2021.
- (2) Unit 1 condenser impacts due to cooling tower fill material and wind deflectors degrading vacuum, on August 3, 2021.
- (3) Unit 1 and 2 chemical volume and control system re-scoping, on August 17, 2021.

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (8 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Unit 1 high risk nuclear troubleshooting plan for loop 1 MFRV malfunction, on July 8, 2021.
- (2) Unit 1 elevated risk due to train A nuclear service cooling water (NSCW) fan #2 being declared inoperable, on July 12, 2021.
- (3) Unit 1 train A CCP system outage with planned risk informed completion time, on July 14, 2021.
- (4) Unit 1 and 2 high risk nuclear troubleshooting plan for digital feedwater control ovation feed and steam flow indication adjustment, on July 19, 2021.
- (5) Unit 2 elevated risk due to train B EDG inoperable for planned maintenance, on August 4, 2021.

- (6) Unit 1 yellow shutdown risk for containment due to reactor coolant system not intact and containment equipment hatch being open, on September 14, 2021.
- (7) Unit 2 generator hydrogen leak into stator water cooling system, on September 16, 2021.
- (8) Unit 1 yellow shutdown risk due to cold mid-loop operations, on September 30, 2021.

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (10 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) Unit 1 train B CCW pump #4 breaker incorrect ground relay setting, on July 5, 2021.
- (2) Unit 1 Loop 1 MFRV malfunction, on July 7, 2021.
- (3) Unit 2 train B NSCW basin level lowering, on July 8, 2021.
- (4) Unit 2 train A safety injection (SI) pump lube oil flow outside of expected limits, on July 14, 2021.
- (5) Unit 1 train B EDG KVAR swinging during surveillance, on July 28, 2021.
- (6) Unit 1 train B CCW pump #2 pump-side inboard bubbler found low after an oil fill, on August 9, 2021.
- (7) Unit 1 train B NSCW fan #3 elevated vibrations, on August 10, 2021.
- (8) Unit 1 train D low voltage bus alarm on 1DD1 during residual heat removal (RHR) isolation valve inverter load test, on September 3, 2021.
- (9) Unit 1 reactor vessel level instrumentation system transmitters failed calibration, on September 18, 2021.
- (10) Unit 1 train A motor driven AFW pump motor stator temperatures rising while feeding steam generators, on September 27, 2021.

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Unit 1 train A EDG mechanical governor modification, on August 26, 2021.

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) Unit 1 loop 1 digital feedwater overation relay electronics module replacement, on July 8, 2021.
- (2) Unit 1 train A spent fuel pool cooling system outage, on July 12, 2021.
- (3) Unit 1 train B SI pump relief valve replacement (1PSV8853B), on July 27, 2021.
- (4) Unit 1 train A CCP system outage, on July 14, 2021.
- (5) Unit 1 train A emergency safety feature chiller system outage, on July 19, 2021.

- (6) Unit 1 train A RHR system outage, on July 21, 2021.

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Partial)

- (1) (Partial) The inspectors evaluated refueling outage 1R23 from September 12, 2021, to September 30, 2021. The inspectors completed inspection procedure Sections 03.01.a through 03.01.c.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (3 Samples)

- (1) 28912B-2 and 28912D-2, 92-Day Unit 2 "B" and "D" Train Safety Related Battery and Charger Inspection and Maintenance, on August 4, 2021.
- (2) 14980A-1 and 14670A-1, Diesel Generator 1A Operability Test and Diesel Generator 1A Hot Restart Test, on August 11, 2021.
- (3) 14722-1, Emergency Core Cooling System to Reactor Water Storage Tank Backleakage In-service Test, on September 18, 2021.

Containment Isolation Valve Testing (IP Section 03.01) (1 Sample)

- (1) 14378-1, Containment Penetration No. 78 Containment Sump Pumps Discharge Local Leak Rate Test, on September 8, 2021.

FLEX Testing (IP Section 03.02) (1 Sample)

- (1) 480V FLEX diesel generator full load test, July 21, 2021.

71114.02 - Alert and Notification System Testing

Inspection Review (IP Section 02.01-02.04) (1 Sample)

- (1) The inspectors evaluated the maintenance and testing of the alert and notification system during the week of August 9, 2021.

71114.03 - Emergency Response Organization Staffing and Augmentation System

Inspection Review (IP Section 02.01-02.02) (1 Sample)

- (1) The inspectors evaluated the readiness of the Emergency Response Organization during the week of August 9, 2021.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

- (1) The inspectors evaluated submitted Emergency Action Level, Emergency Plan, and Emergency Plan Implementing Procedure changes during the week of August 9, 2021. This evaluation does not constitute NRC approval.

71114.05 - Maintenance of Emergency Preparedness

Inspection Review (IP Section 02.01 - 02.11) (1 Sample)

- (1) The inspectors evaluated the maintenance of the emergency preparedness program during the week of August 9, 2021.

RADIATION SAFETY

71124.01 - Radiological Hazard Assessment and Exposure Controls

Radiological Hazard Assessment (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated how the licensee identifies the magnitude and extent of radiation levels and the concentrations and quantities of radioactive materials and how the licensee assesses radiological hazards during the Unit 1 refueling outage (1R23).

Instructions to Workers (IP Section 03.02) (1 Sample)

The inspectors evaluated instructions to workers including radiation work permits used to access high radiation areas.

- (1) The inspectors reviewed the following:

Radiation Work Packages

- Radiation Work Permit (RWP) 21-1303 - Secondary S/Gs - Sludge Lance, FOSAR, Hand Holes on Steam Generators 1, 2, 3, 4
- RWP 21-1400 - Reactor head assembly/assembly
- RWP 21-1612 - Core Exit Thermocouple Connector Upgrade

Electronic Alarming Dosimeter Alarms

- RWP 20-2203, 08/31/2020
- RWP 20-2100, 08/24/2020
- RWP 20-2010, 02/18/2021

Labeling of Containers

- Sea Lands in Satellite Radiation Control Area (RCA) outside Unit 1 Equipment Hatch
- Equipment/Tool Boxes inside Unit 1 Containment
- Equipment/Tool Boxes in Satellite RCA outside the Radwaste Processing Facility

Contamination and Radioactive Material Control (IP Section 03.03) (3 Samples)

The inspectors evaluated licensee processes for monitoring and controlling contamination and radioactive material.

- (1) Observed radiation protection technician (RPT) surveys of potentially contaminated material at Unit 1 equipment hatch during refueling outage 1R23
- (2) Observed RPT surveys of potentially contaminated material at Unit 1 personnel hatch during refueling outage 1R23
- (3) Observed RPT surveys of potentially contaminated material at the RCA exit during refueling outage 1R23

Radiological Hazards Control and Work Coverage (IP Section 03.04) (3 Samples)

The inspectors evaluated in-plant radiological conditions during facility walkdowns and observation of radiological work activities.

- (1) RWP 21-1400, Reactor head disassembly/assembly
- (2) RWP 21-1612, CETC connector upgrade
- (3) RWP 21-1303, Secondary steam generator hand holes on steam generator 2

High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (5 Samples)

The inspectors evaluated licensee controls of the following High Radiation Areas and Very High Radiation Areas:

- (1) Unit 1 RHR Heat Exchanger room in Unit 1 containment
- (2) Unit 2 reactor building personnel hatch entry
- (3) Unit 1 Recycle Evaporator Feed Demin Valve Gallery
- (4) Unit 1 Spent Resin Sluice Pump
- (5) Unit 1 Waste Evaporator Condensate Demin Valve Gallery

Radiation Worker Performance and Radiation Protection Technician Proficiency (IP Section 03.06) (1 Sample)

- (1) The inspectors evaluated radiation worker and radiation protection technician performance as it pertains to radiation protection requirements during 1R23.

71124.02 - Occupational ALARA Planning and Controls

Radiological Work Planning (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's radiological work planning.

- (1) ALARA Plan 21-1301, Nozzle dam install/remove
- (2) ALARA Plan 21-1302, Eddy current testing
- (3) ALARA Plan 21-1400, Reactor head disassembly/reassembly
- (4) ALARA Plan 21-1612, Core exit thermocouple upgrade

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (3 Samples)

The inspectors evaluated dose estimates and exposure tracking.

- (1) Micro ALARA Plan 20-2004, Scaffolding, Post-job ALARA review, 9/23/20
- (2) ALARA Plan 20-2203, Replace RCP pump #1, 10/21/20
- (3) Daily dose tracking burndown curves, 1R23 refueling outage, 9/13/21 - 9/17/21

Implementation of ALARA and Radiological Work Controls (IP Section 03.03) (2 Samples)

The inspectors reviewed as low as reasonably achievable practices and radiological work controls.

- (1) 1R23 refueling outage, Reactor head disassembly
- (2) 1R23 refueling outage, Reactor head lift

Radiation Worker Performance (IP Section 03.04) (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician performance during:

- (1) 1R23 refueling outage, Reactor head disassembly.

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

Walkdowns and Observations (IP Section 03.01) (5 Samples)

The inspectors evaluated the following radioactive effluent systems during walkdowns:

- (1) Unit 1 and Unit 2, RE-12442A/B/C - Plant Vent Effluent (Particulate, Iodine, and Radiogas) Monitors (Low Range)
- (2) Unit 1 and Unit 2, RE-0018 - Waste Liquid Effluent Monitor
- (3) Unit 1 and Unit 2, RE-0021 - Seam Generator Blowdown Liquid Process Monitor
- (4) Unit 1 RE-12444A/B/C/D/E - Plant Vent Effluent Monitors (Unit 2 RE-124444 observed but was not commissioned for operation yet)
- (5) Unit 1 Auxiliary Building Ventilation System Filter Surveillance (HEPA/Charcoal test)

Sampling and Analysis (IP Section 03.02) (3 Samples)

Inspectors evaluated effluent samples, sampling processes and compensatory samples, as available.

- (1) Permit G-20210617-210B, Unit 1- Containment Release, 06/17/2021
- (2) Permit G-20210619-213-B, Unit 2- Containment Release, 06/19/2021
- (3) Permit L-20200928-079-B, Unit 1- Waste Monitor Tank #12 (sample for OOS Monitor RE-0018), 09/28/2020

Dose Calculations (IP Section 03.03) (2 Samples)

The inspectors evaluated the following dose calculations:

- (1) Gaseous Permit Release No.: G-20210619-213-B, dated 06/19/2021
- (2) Liquid Permit Release No.: L-20200928-079-B, dated 09/28/2020

71124.07 - Radiological Environmental Monitoring Program

Environmental Monitoring Equipment and Sampling (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated environmental monitoring equipment and observed collection of environmental samples.

Radiological Environmental Monitoring Program (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the implementation of the licensee's radiological environmental monitoring program.

GPI Implementation (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated the licensee's implementation of the Groundwater Protection Initiative program to identify incomplete or discontinued program elements.

71124.08 - Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation

Radioactive Material Storage (IP Section 03.01) (1 Sample)

- (1) Inspectors evaluated the licensee's performance in controlling, labeling and securing radioactive materials.

Radioactive Waste System Walkdown (IP Section 03.02) (1 Sample)

- (1) Inspectors walked down accessible portions of the solid radioactive waste systems and evaluated system configuration and functionality.

Waste Characterization and Classification (IP Section 03.03) (2 Samples)

The inspectors evaluated the licensee's characterization and classification of radioactive waste.

- (1) 2020 Unit 1 Reactor Coolant System Filters
- (2) 2020 Dry Active Waste (DAW)

Shipping Records (IP Section 03.05) (4 Samples)

The inspectors evaluated the following non-excepted radioactive material shipments through a record review:

- (1) RVRS 20-003, Low Specific Activity (LSA), DAW
- (2) RVRS 20-004, LSA, Resin
- (3) RVRS 20-006, Type B, Filters
- (4) RVRS 21-004, LSA, DAW

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS07: High Pressure Injection Systems (IP Section 02.06) (2 Samples)

- (1) Unit 1 (July 1, 2020 – June 30, 2021)
- (2) Unit 2 (July 1, 2020 – June 30, 2021)

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1 (July 1, 2020 – June 30, 2021)
- (2) Unit 2 (July 1, 2020 – June 30, 2021)

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1 (July 1, 2020 – June 30, 2021)
- (2) Unit 2 (July 1, 2020 – June 30, 2021)

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

- (1) September 01, 2020 through August 31, 2021

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample (IP Section 02.16) (2 Samples)

- (1) Unit 1 (June 1, 2019 through August 14, 2021)
- (2) Unit 2 (June 1, 2019 through August 14, 2021)

EP01: Drill/Exercise Performance (DEP) Sample (IP Section 02.12) (1 Sample)

- (1) Unit 1 (October 1, 2020, through June 30, 2021)
Unit 2 (October 1, 2020, through June 30, 2021)

EP02: Emergency Response Organization (ERO) Drill Participation (IP Section 02.13) (1 Sample)

- (1) Unit 1 (October 1, 2020, through June 30, 2021)
Unit 2 (October 1, 2020, through June 30, 2021)

EP03: Alert And Notification System (ANS) Reliability Sample (IP Section 02.14) (1 Sample)

- (1) Unit 1 (October 1, 2020, through June 30, 2021)
Unit 2 (October 1, 2020, through June 30, 2021)

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Fire protection program and the licensee's evaluation of multiple spurious operations as it relates to Information Notice 92-18, Condition Report 10818441.

INSPECTION RESULTS

Licensee-Identified Non-Cited Violation	71152
This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.	
Violation: Vogtle Unit 1 & 2 Operating License Condition 2.G requires the licensee to "maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report." The Final Safety Analysis Report, section 9.5.1.3.E.7, requires that one train of equipment and cables be free from fire damage.	
Contrary to the above, since March 16, 1987, the licensee has failed to ensure one train of equipment and cables was free from fire damage. Specifically, the licensee identified multiple fire areas and valves that may be impacted by a fire event such that the torque and limit switch is bypassed which results in a stalled motor and potential valve damage.	
Significance/Severity: Green. The inspectors assessed the significance of the finding using Appendix F, "Fire Protection and Post - Fire Safe Shutdown SDP." Utilizing IMC 0609, Appendix F, the inspectors determined the finding was of very low safety significance (Green) because the performance deficiency constituted a low degradation of safe shutdown systems. The inspectors utilized risk insights and evaluations from the licensee to determine that the licensee is not crediting the repositioning of these valves in their internal events probabilistic risk assessment.	
Corrective Action References: Condition Report 10818441	

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On August 12, 2021, the inspectors presented the Emergency Preparedness Program inspection results to Mr. Drayton Pitts, Site Vice President, and other members of the licensee staff.
- On August 19, 2021, the inspectors presented the RP Public Radiation Safety and Transportation inspection results to Mr. Jesse Thomas, Plant Manager, and other members of the licensee staff.
- On September 17, 2021, the inspectors presented the RP Occupational Baseline inspection results to Mr. Drayton Pitts and other members of the licensee staff.
- On October 22, 2021, the inspectors presented the integrated inspection results to Mr. Jesse Thomas and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Miscellaneous	NMP-GM-025	Seasonal Readiness Process	7.0
71111.01	Procedures	NMP-OS-017	Severe Weather	3.0
71111.04	Corrective Action Documents	Condition Reports	10828286, 10829033	
71111.04	Drawings	1X4DB116-1	P & I Diagram - Chemical & Volume Control System - System No. 1208	53.0
71111.04	Drawings	1X4DB116-2	P&I Diagram - Chemical & Volume Control System - System No. 1208	37.0
71111.04	Drawings	1X4DB116-2	P&I Diagram - Chemical & Volume Control System - System No. 1208	37.0
71111.04	Drawings	1X4DB130	P & I Diagram Spent Fuel Pool Cooling and Purification System	50.0
71111.04	Procedures	12006RFO-1	Unit Cooldown to Cold Shutdown for Refueling	3.0
71111.04	Procedures	12007-C	Refueling Operations (Mode 5 to Mode 6)	85.0
71111.04	Procedures	13719-1	Spent Fuel Cooling and Purification System	58.0
71111.05	Corrective Action Documents Resulting from Inspection	Condition Reports	10824371, 10824367, 10824089	
71111.05	Fire Plans	92736-2	Zone 36 - Auxiliary Building - Level A, CCW Pumps, Train A Firefighting Preplan	5.0
71111.05	Fire Plans	92737-2	Zone 37 - Auxiliary Building - Level A, CCW Pumps, Train B Firefighting Preplan	3.12
71111.05	Fire Plans	92760-2	Zone 60 - Control Building - Level B Fire Fighting Preplan	1.0
71111.05	Fire Plans	92761-2	Zone 61 - Control Building - Level B Fire Fighting Preplan	1.1
71111.05	Fire Plans	92762-2	Zone 62 - Control Building - Level B Fire Fighting Preplan	2.0
71111.05	Fire Plans	92763-2	Zone 63 - Control Building - Level B Fire Fighting Preplan	0.2
71111.05	Fire Plans	92764-2	Zone 64 - Control Building - Level B Fire Fighting Preplan	1.1
71111.05	Fire Plans	92782-2	Zone 82 - Control Building - Level B Fire Fighting Preplan	1.2
71111.05	Fire Plans	92787-2	Zone 87 - Control Building - Level A Fire Fighting Preplan	2.2
71111.05	Fire Plans	92788-2	Zone 88 - Control Building - Level A Fire Fighting Preplan	2.2
71111.05	Fire Plans	92789-2	Zone 89 - Control Building - Level A Fire Fighting Preplan	3.1

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71111.05	Fire Plans	92790-2	Zone 90 - Control Building - Level A Fire Fighting Preplan	2.2
71111.05	Fire Plans	92793-2	Zone 93 - Control Building Level A Fire Fighting Preplan	3.2
71111.05	Fire Plans	92802-2	Zone 102 - Control Building - Level A Fire Fighting Preplan	2.2
71111.05	Fire Plans	92807-1	Zone 107 - Control Building - Levels 1 and 2 Fire Fighting Preplan	5.1
71111.05	Fire Plans	92808-1	Zone 108 - Control Building - Levels 1 and 2 Fire Fighting Preplan	5.1
71111.05	Fire Plans	92820-1	Zone 120 - Control Building - Level 2 Fire Fighting Preplan	7
71111.05	Fire Plans	92843-1	Zone 143 - Diesel Generator Building Electrical Tunnel A - Level B Fire Fighting Preplan	3.1
71111.05	Fire Plans	92858-2	Zone 158 - Control Building - Level A Fire Fighting Preplan	1.2
71111.05	Fire Plans	92859-2	Zone 159 - Control Building - Level A Fire Fighting Preplan	1.2
71111.05	Fire Plans	92861-1	Zone 161 - Diesel Generator Building Fire Fighting Preplan	4
71111.05	Fire Plans	92863-1	Zone 163 - Diesel Generator Building - Train A DFO Day Tank Fire Fighting Preplan	3.2
71111.05	Procedures	NMP-ES-035-014	Fleet Transient Combustible Controls	5.0
71111.11Q	Drawings	1X4DB168-3	P&I Diagram - Condensate & Feedwater System - System No. 1305	36.0
71111.11Q	Miscellaneous		Vogtle 1-2 Off Year Exercise Scenario Book	07/20/2021
71111.11Q	Procedures	13506-C	Digital Feedwater Control System	10.1
71111.11Q	Procedures	18016-1	Condensate and F/W Malfunction	3.0
71111.12	Corrective Action Documents	Condition Reports	10817516, 10827191, 10827787, 10827797	
71111.12	Corrective Action Documents	Corrective Action Reports	279589	
71111.12	Corrective Action Documents	Technical Evaluations	1063056, 1063653	
71111.12	Corrective Action Documents Resulting from Inspection	Condition Reports	10830116	
71111.12	Miscellaneous	2021-0907	Maintenance Rule Expert Panel Meeting	09/07/2021
71111.12	Miscellaneous	2021-20210209	Maintenance Rule Expert Panel Meeting #2021-20210209	02/09/2021
71111.12	Miscellaneous	RBD-V12-5069-	10 CFR 50.69 System Categorization - Chemical & Volume	3

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		1208	Control	
71111.12	Miscellaneous	SPX WU1/235.003948	Vogtle Unit 1 Y-Y Axis Wind Wall Design Changes	08/11/2021
71111.12	Procedures	NMP-ES-027	Maintenance Rule Program	10.4
71111.13	Corrective Action Documents	Condition Reports	10827508	
71111.13	Corrective Action Documents Resulting from Inspection	Condition Reports	10817902, 10827146	
71111.13	Miscellaneous		Crew Fleet Learning CR# 10827146 - Gap in Equipment Hatch Closure Crew Performance	09/14/2021
71111.13	Miscellaneous		Vogtle 1&2 Sitewide Stand Down	09/15/2021
71111.13	Miscellaneous		Daily Status Report	07/12/2021
71111.13	Miscellaneous		Daily Status Report	07/13/2021
71111.13	Miscellaneous		eSOMS Logs 07/12-13/2021	
71111.13	Miscellaneous		Phoenix Unit 1 RICT	07/13/2021
71111.13	Miscellaneous		Daily Plan Status	07/14/2021
71111.13	Miscellaneous		Phoenix Unit 1 RICT	07/14/2021
71111.13	Miscellaneous		Plan of the Day	07/14/2021
71111.13	Miscellaneous	10032-C	Outage Risk Assessment Monitoring - Mode 6 Midloop & SIP B Tagout	09/30/2021
71111.13	Miscellaneous	1093810	ODMI U2 Main Generator Stator Cooling Hydrogen Leak	09/30/2021
71111.13	Procedures	10032-C	Outage Risk Assessment Monitoring	18.1
71111.13	Procedures	13506-C	Digital Feedwater Control System	10.1
71111.13	Procedures	27504-C	Equipment Hatch Emergency Closure	23.1
71111.13	Procedures	NMP-GM-031-001	Online Maintenance Rule (a)(4) Risk Calculations	6.0
71111.13	Procedures	NMP-OS-010	Protected Train/Division and Protected Equipment Program	8.1
71111.13	Work Orders		SNC1166760, SNC929820	
71111.15	Corrective Action Documents	Condition Reports	10817682, 10817917, 10818748, 10818906, 10824580, 10811118, 10830224, 10831207, 10818342, 10810094, 10800430, 10800442, 10812379, 10816162, 10632909, 10828263	

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71111.15	Corrective Action Documents	Technical Evaluations	1091790	
71111.15	Corrective Action Documents Resulting from Inspection	Condition Reports	10828667, 10829369, 10812916	
71111.15	Drawings	1X3D-AA-G01A	Main One Line - Class 1E 125V DC and 120V Vital AC Systems	11.0
71111.15	Drawings	1X3D-AA-G02A	One Line Diagram - 120V AC Class 1E Vital Instrument Dist Pnls 1AY1A, 1BY1B, 1CY1A & 1DY1B	30.0
71111.15	Drawings	1X3D-AA-G02C	120V AC Class 1E Vital Instr Distr Pnls 1-1807-03-V15 & V16	17.0
71111.15	Drawings	1X3D-AA-M08A-041	Unit 1 Relaying Data	1.0
71111.15	Drawings	1X3D-AA-M08A-040	Unit 1 Relaying Data	2.0
71111.15	Drawings	1X4DB168-3	P&I Diagram - Condensate & Feedwater System - System No. 1305	36.0
71111.15	Drawings	2X4DB134	P & I Diagram - Nuclear Service Cooling Water System - System No. 1202	31.0
71111.15	Miscellaneous		1B NSCW Fan #3 Vibration Review	08/10/2021
71111.15	Miscellaneous	Deficiency Card 190-193	RVLIS exceeds static pressure shift	04/07/1990
71111.15	Miscellaneous	Westinghouse Technical Bulletin 11-6	Reactor Vessel Level Instrumentation System Calibration Anomalies Due to Air In-leakage	03/14/2011
71111.15	Procedures	13506-C	Digital Feedwater Control System	10.1
71111.15	Procedures	18016-1	Condensate and F/W Malfunction	3.0
71111.15	Procedures	23200-CD1	Unit 1 Data Sheets for Westinghouse Type CO Overcurrent Relay Calibration	7.4
71111.15	Procedures	24676-1	Reactor Vessel Level Transmitter Calibration	18.0
71111.15	Procedures	83308-C	Testing of Safety - Related NSCW System Coolers	33.3
71111.15	Procedures	NMP-ES-074-005	Fleet Vibration Instruction	3.0
71111.15	Work Orders		SNC1171219, SNC1180726, SNC1180760, SNC1180768,	

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			SNC1180788, SNC1137391, SNC1165949, SNC1166760, SNC781853	
71111.18	Corrective Action Documents Resulting from Inspection	Condition Reports	10826061	
71111.18	Engineering Changes	SNC953976	Unit 1 Emergency Diesel Generator Governor DCP	2
71111.18	Miscellaneous	X4AK01A	Specifications for EDG speed control upgrade	4
71111.18	Work Orders		SNC957852	
71111.19	Corrective Action Documents Resulting from Inspection	Condition Reports	10812285	
71111.19	Procedures	13506-C	Digital Feedwater Control System	10.1
71111.19	Work Orders		SNC1165582, SNC1166760, SNC589229, SNC884948, SNC916714, SNC972822, SNC981336, SNC690133, SNC986323	
71111.20	Corrective Action Documents	Condition Reports	10828893, 10829090, 10827822, 10828664, 10828688, 10827473, 10827232, 10827820, 10828197, 10827823	
71111.20	Corrective Action Documents Resulting from Inspection	Condition Reports	10829871	
71111.22	Corrective Action Documents	Condition Reports	10825778	
71111.22	Corrective Action Documents Resulting from Inspection	Condition Reports	10825453, 10826051	
71111.22	Procedures	14378-1	Containment Penetration No. 78 Containment Sump Pumps Discharge Local Leak Rate Test	12.1
71111.22	Procedures	14670A-1	Diesel Generator 1A Hot Restart Test	1.6
71111.22	Procedures	14980A-1	Diesel Generator 1A Operability Test	32

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71111.22	Procedures	28912B-2	92-Day Unit 2 "B" Train Safety Related Battery and Charger Inspection and Maintenance	4.0
71111.22	Procedures	28912D-2	92-Day Unit 2 "D" Train Safety Related Battery and Charger Inspection and Maintenance	4.0
71111.22	Work Orders		SNC1119986, SNC1135974, SNC1136137	
71124.01	Corrective Action Documents Resulting from Inspection	10828031		
71124.01	Corrective Action Documents Resulting from Inspection	10828073		
71124.01	Corrective Action Documents Resulting from Inspection	10828077		
71124.01	Corrective Action Documents Resulting from Inspection	10828078		
71124.01	Procedures	NMP-HP-108	Issuance, Use, and Collection of Personnel Dosimetry	Version 2.11
71124.01	Procedures	NMP-HP-108-002	Use of EDE (Effective Dose Equivalent) Methodologies	Revision 3.2
71124.02	ALARA Plans	21-1004	Micro ALARA Plan, Installation and Removal of Scaffolding	
71124.02	Corrective Action Documents	CR 10809912		
71124.02	Corrective Action Documents Resulting from Inspection	10828079		
71124.02	Corrective Action Documents Resulting from Inspection	10828081		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71124.02	Corrective Action Documents Resulting from Inspection	10828082		
71124.02	Corrective Action Documents Resulting from Inspection	10828083		
71124.02	Procedures	NMP-AD-041	Cobalt Reduction Program	Version 2.0
71124.02	Procedures	NMP-HP-204	ALARA Planning and Job Review	Version 9.2
71124.06	Corrective Action Documents	CRs: 10799784, 10777270, 10769896, 10766114, 10736963, 10736160, 10731997, and 10730328	Corrective Action Reports	Various
71124.06	Procedures	33040-C	Compositing Samples Weekly, Monthly, Quarterly	Rev. 22
71124.06	Procedures	36015-OEMS	RADIOACTIVE LIQUID EFFLUENT RELEASE PERMIT GENERATION AND DATA CONTROL COMPUTER (OpenEMS) METHOD	Rev. 10.1
71124.06	Procedures	37420-1	Sampling of the Unit One Radioactive Liquid Waste Management System	Rev. 5.2
71124.06	Procedures	37420-2	Sampling of the Unit Two Radioactive Liquid Waste Management System	Rev. 4.3
71124.06	Procedures	37420-C	Sampling of the Common Radioactive Liquid Waste Management System	Rev. 5.2
71124.07	Corrective Action Documents Resulting from Inspection	CR 10821631		
71124.07	Corrective Action Documents	CR 10821633		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Resulting from Inspection			
71124.07	Corrective Action Documents Resulting from Inspection	CR 10821634		
71124.07	Corrective Action Documents Resulting from Inspection	CR 10821637		
71124.07	Corrective Action Documents Resulting from Inspection	CR 10822624		
71124.07	Miscellaneous	2020 VEGP AREOR	2020 Plant Vogtle Annual Radiological Environmental Operating Report	
71124.07	Procedures	A19N5001	Radwaste Transfer Tunnel Visual Inspection	Revision 2
71124.07	Procedures	NMP-EN-002	Radiological Groundwater Protection Program	Version 9.3
71124.07	Radiation Surveys	RIS #221251	Radwaste Transfer Tunnel	12/14/2018
71124.07	Work Orders	SNC 102645	Waste Water Transfer Tunnel Visual Inspection	05/19/2021
71124.08	Corrective Action Documents Resulting from Inspection	CR 10821331		
71124.08	Corrective Action Documents Resulting from Inspection	CR 10821339		
71124.08	Procedures	NMP-HP-408	Solid Radioactive Waste Scaling Factor Determination and Implementation and Waste Classification	Version 2.0
71151	Miscellaneous		Unit 1 and Unit 2 MSPI Heat Removal System Derivation Report - Unavailability Index from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI Heat Removal System Derivation	

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			Report - Unreliability Index from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI for High Pressure Injection Systems from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI High Pressure Injection System Derivation Report - Unavailability Index from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI High Pressure Injection System Derivation Report - Unreliability Index from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI for RHR from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI RHR Derivation Report - Unavailability Index from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI RHR Derivation Report - Unreliability Index from July 2020 - June 2021	
71151	Miscellaneous		MSPI Indicator Margin Remaining in Green from July 2020 - June 2021	
71151	Miscellaneous		Unit 1 and Unit 2 MSPI for AFW from July 2020 - June 2021	
71152	Calculations	RBA-21-003-V	IN 92-18 FPRA Impacts	Rev. 1
71152	Corrective Action Documents	Condition Reports	10818441	