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

July 21, 2025

Eric S. Carr
President - Nuclear Operations and
Chief Nuclear Officer
Dominion Energy
Innsbrook Technical Center
5000 Dominion Blvd
Glen Allen, VA 23060-6711

SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 – INTEGRATED INSPECTION REPORT 05000280/2025002, 05000281/2025002, AND 07200055/2025002

Dear Eric S. Carr:

On June 30, 2025, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Surry Power Station. On July 16, 2025, the NRC inspectors discussed the results of this inspection with James Shell, Acting Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

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

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."

Sincerely,

Signed by Smith, Steven
on 07/21/25

Steven P. Smith, Chief
Projects Branch 6
Division of Operating Reactor Safety

Docket Nos. 05000280, 05000281, and 07200055
License Nos. DPR-32 and DPR-37

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: SURRY POWER STATION, UNITS 1 AND 2 – INTEGRATED INSPECTION REPORT 05000280/2025002, 05000281/2025002, AND 07200055/2025002 DATED JULY 21, 2025

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OFFICE	RII/DORS	RII/DORS	RII/DORS		
NAME	C. Even	D. Jung	S. Smith		
DATE	07/18/2025	07/16/2025	07/21/2025		

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000280, 05000281, and 07200055
License Numbers:	DPR-32 and DPR-37
Report Numbers:	05000280/2025002, 05000281/2025002, and 07200055/2025002
Enterprise Identifier:	I-2025-002-0026 and I-2025-001-0092
Licensee:	Dominion Energy
Facility:	Surry Power Station, Units 1 and 2
Location:	Surry, VA
Inspection Dates:	April 01, 2025, to June 30, 2025
Inspectors:	J. Bell, Senior Health Physicist S. Downey, Senior Reactor Inspector C. Even, Senior Project Engineer D. Jung, Resident Inspector S. Kennedy, Senior Resident Inspector D. Neal, Health Physicist
Approved By:	Steven P. Smith, Chief Projects Branch 6 Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Surry Power Station, 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.

List of Findings and Violations

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

Additional Tracking Items

None.

PLANT STATUS

Units 1 and 2 operated at or near rated thermal power for the entire 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 performed activities described in IMC 2515, Appendix D, "Plant Status," observed risk significant activities, and completed on-site portions of IPs. 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.

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 seasonal hot temperatures for the following systems on May 8, 2025:
- emergency service water pumps
- Unit 1 refueling water storage tank
- Unit 2 refueling water storage tank

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 charging system following maintenance on 1-CH-P-1C, Unit 1 C charging pump, on April 4, 2025
(2) Units 1 and 2 Technical Specifications required offsite power sources during #1 transformer maintenance on May 20, 2025
(3) #2 emergency diesel generator (EDG) following #2 EDG quarterly testing on June 11, 2025

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 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 pump house rooms 1 and 2, fire zones 32A and 32B, elevation 27 feet - 6 inches, on April 3, 2025
(2) Fuel building, fire zone 17-Z21, elevation 6 feet - 10 inches and 15 feet - 10 inches, on April 29, 2025
(3) Fuel building, fire zone 17-Z21, elevation 27 feet - 6 inches and 45 feet - 10 inches, on April 29, 2025
(4) Alternate alternating current diesel building, fire zone 69, elevation 35 feet, on May 30, 2025

71111.07A - Heat Exchanger/Sink Performance

Annual Review (IP Section 03.01) (1 Sample)

The inspectors evaluated readiness and performance of:

(1) 1-CC-E-1A and 1-CC-E-1C, 1A and 1C component cooling heat exchangers (work order (WO) 38204359002 and WO 38204359443) on May 29, 2025

71111.11Q - Licensed Operator Requalification 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 main control room (MCR) during Unit 1 containment spray system testing and Unit 2 refueling water storage tank (RWST) temporary chiller breaker trip, on June 11, 2025.

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

(1) The inspectors observed and evaluated licensed operator performance in the simulator during a licensed operator requalification training involving a large break loss of coolant accident, cold leg recirculation, and a leak in the recirculation spray heat exchanger, on April 9, 2025.

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 personnel hatch emergency escape manway test failure on January 30, 2025 (condition report (CR)1281862)
(2) Unit 2 RWST refrigeration units 1A and 1B tripped on high pressure, on April 4, 2025 (CR1287894)
(3) Unit 1 MCR/emergency switchgear rooms (ESGR) air conditioning system (ACS) chiller 4E failure on April 29, 2025 (CR1279225)

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (3 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) Medium risk plan review during Unit 1 main generator standby auto voltage regulator repair on April 1, 2025
(2) Medium risk plan review during Unit 1 turbine crane load test on April 11, 2025. Operating Experience Smart Sample 2007/03, “Crane and Heavy Lift Inspections, Supplemental Guidance to IP 71111.20 and IP 71111.13” was used to inform this sample.
(3) Units 1 and 2 elevated risk due to MCR/ESGR ACS chiller 4D normal feeder breaker out of service for repair on April 24, 2025

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (7 Samples)

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

(1) CR1280748, common overhead damper connecting Unit 1 and Unit 2 ESGR did not close as expected, on January 15, 2025
(2) CR1287999, 1-SW-ICV-3211, MCR/ESGR ACS chiller 4E service water recirculation flow indicator FI-133E low side isolation valve, found seized on April 7, 2025
(3) CR1288528, loss of system voltage alarm on A reserve station service transformer, on April 14, 2025
(4) CR1287491, nonconformance to design bases due to possible tornado missile strike on component cooling, on April 15, 2025
(5) CR1290073, oil pressure for Unit 2 charging pump 1C lube oil pressure is indicating low out of specification, on April 26, 2025
(6) CR1291443, Unit 2 reactor coolant system total leak rate (identified) is increasing, on May 16, 2025
(7) CR1292686, #2 EDG speed rate of rise suspect while performing monthly start exercise test on May 27, 2025

71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

Post-Maintenance Testing (PMT) (IP Section 03.01) (5 Samples)

(1) 2-OP-CS-003, Refueling Water Storage Tank Recirculation and Temperature Control, after repair of the 2-CS-MR-1B, RWST refrigeration unit 1B, on April 10, 2025 (WO 38204371999)
(2) 0-OPT-SW-003, Emergency Service Water Pump 1-SW-P-1C, following battery replacement, on April 17, 2025 (WO 38204343903)

(3) 0-OP-VS-006, Control Room and Relay Room Ventilation System, following planned maintenance on 1-VS-AC-6, Unit 1 ESGR air handling unit, on April 21, 2025 (WO 38204303056)
(4) 1-OPT-EG-009, #1 Emergency Diesel Generator Major Maintenance Operability, following 18-month planned maintenance on May 7, 2025 (WO 38204345334)
(5) 1-IPM-SI-L-924, Safety Injection Accumulator Tank 1-SI-TK-1B Level Loop L-1-924 Calibration, following investigation of 1-SI-TK-1B level deviation on June 4, 2025 (WO 38204373825)

Surveillance Testing (IP Section 03.01) (1 Sample)

(1) 1-PT-2.33A, Unit 1 Emergency Bus Undervoltage and Degraded Protection Test "H" Train, on April 1, 2025 (WO 38204358207)

Inservice Testing (IST) (IP Section 03.01) (1 Sample)

(1) 2-OPT-FW-006, Auxiliary Feedwater Motor Operated Valve Test, on April 15, 2025 (WO 38204358204)

Diverse and Flexible Coping Strategies (FLEX) Testing (IP Section 03.02) (1 Sample)

(1) 0-MPM-1960-01, Semi-annual or Annual Test of Beyond Design Basis (BDB) FLEX Equipment, Attachment 11, B BDB Auxiliary Feedwater Pump Annual Test, on June 18, 2025 (WO 38204340753)

71114.06 - Drill Evaluation

Additional Drill and/or Training Evolution (1 Sample)

The inspectors evaluated:

(1) The inspectors observed a licensed operator training evolution in the MCR simulator that contributed to the Emergency Response Organization Performance Indicators on May 14, 2025. Events included a loss of feedwater, a reactor trip, and an unisolable leak outside containment.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (2 Samples)

(1) Unit 1 (January 1 through December 31, 2024)
(2) Unit 2 (January 1 through December 31, 2024)

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (2 Samples)

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

(1) Mechanical agitation of safety injection pressure isolation valves (CR1272765)
(2) N-31, Unit 2 source range channel A nuclear instrumentation, multiple failures (CR1274964 and Corrective Action13020792)

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program and related documents such as trend reports, licensee performance indicators, system health reports, and performance improvement and training observations for potential adverse trends that might be indicative of a more significant safety issue.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855 - Operation Of An ISFSI

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) 2690, "Inspection Program for Storage of Spent Reactor Fuel and Reactor-Related Greater-than-Class C Waste at Independent Spent Fuel Storage Installations (ISFSI) and for 10 CFR Part 71 Transportation Packagings."

Operation Of An ISFSI (1 Sample)

(1) From May 12 - 23, 2025 the inspectors performed a review of the licensee's ISFSI activities to verify compliance with regulatory requirements. During the on-site inspection, the inspectors reviewed licensee activities in each of the five safety focus areas including occupational exposure, public exposure, fuel damage, confinement, and impact to plant operations.

The inspectors reviewed selected procedures and records and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards. Additionally, the inspectors performed independent walkdowns of the ISFSI haul path and the ISFSI pad.

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On July 16, 2025, the inspectors presented the integrated inspection results to James Shell, Acting Site Vice President, and other members of the licensee staff.
- On May 22, 2025, the inspectors presented the Operation of an ISFSI inspection results to Dave Wilson, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
60855	Corrective Action Documents Resulting from Inspection	CR 1292792	Incorrect calculation methodology performed on 0-HSP-ISFSI-004	05/28/2025
	Procedures	0-HSP-ISFSI-004	Cask processing procedures and records	1
	Radiation Surveys		Radiation Surveys of ISFSI pad	
71111.01	Procedures	0-OSP-ZZ-003	Hot Weather Preparation	13
71111.04	Procedures	1-OP-CH-001A	Chemical and Volume Control System Alignment	24
		1-OSP-ZZ-003	Unit 1 Safety Systems Status List For Reactor > 200 F, Attachment 5, Independent Offsite AC Circuit Verification	62
		2-OP-EG-001A	EDG 2 System Alignment	08/01/2017
		2-OSP-ZZ-003	Unit 2 Safety Systems Status List For Reactor > 200 F, Attachment 5, Independent Offsite AC Circuit Verification	58
71111.05	Fire Plans	0-FS-FP-163	Fuel Building Elevation 6 feet - 10 inches and 15 feet - 10 inches	10/27/2009
		0-FS-FP-164	Fuel Building Elevation 27 feet - 6 inches and 45 feet - 10 inches	10/27/2009
		0-FS-FP-198	Diesel Fire Pump Room Elevation 27 feet - 6 inches	05/24/2016
		0-FS-FP-199	Electric Fire Pump Room Elevation 27 feet - 6 inches	05/24/2016
		0-FS-FP-225	Alternate AC Diesel Room - Construction Site Elevation 35 FT	07/20/2005
71111.13	Procedures	WM-AA-301	Operational Risk Assessment	27
71152A	Corrective Action Documents Resulting from Inspection	CR1291911	NRC PI&R Comments - Mechanical Agitation of IST Check Valves in 1/2-OPT-SI-014, 023, and 025	05/15/2025
71152S	Procedures	ER-AA-PRS-1004	Equipment Reliability and Critical Component Trending	13
		PI-AA-100-1003	Self Evaluation and Trending	31