



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
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August 7, 2025

David P. Rhoades  
Senior Vice President  
Constellation Energy Generation, LLC  
President and Chief Nuclear Officer (CNO)  
Constellation Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – INTEGRATED  
INSPECTION REPORT 05000333/2025002

Dear David Rhoades:

On June 30, 2025, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at James A. FitzPatrick Nuclear Power Plant. On July 31, 2025, the NRC inspectors discussed the results of this inspection with Alex Sterio, 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,

Sherlyn I. Haney, Acting Chief  
Projects Branch 1  
Division of Operating Reactor Safety

Docket No. 05000333  
License No. DPR-59

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – INTEGRATED INSPECTION REPORT 05000333/2025002 DATED AUGUST 7, 2025

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**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Number: 05000333

License Number: DPR-59

Report Number: 05000333/2025002

Enterprise Identifier: I-2025-002-0043

Licensee: Constellation Nuclear

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Oswego, NY

Inspection Dates: April 1, 2025 to June 30, 2025

Inspectors: E. Miller, Senior Resident Inspector  
V. Fisher, Resident Inspector  
H. Anagnostopoulos, Senior Health Physicist  
B. Dyke, Operations Engineer  
S. Veunephachan, Senior Health Physicist

Approved By: Sherlyn I. Haney, Acting Chief  
Projects Branch 1  
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 James A. FitzPatrick Nuclear Power Plant, 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

FitzPatrick began the inspection period operating at rated thermal power. On April 11, 2025, operators reduced reactor power to 65 percent to perform a planned replacement of the 'C' condensate booster pump motor, turbine valve testing, and control rod scram time testing. On April 12, 2025, operators raised reactor power to 93 percent to enable continued maintenance of the 'C' condensate booster pump following turbine valve testing and control rod testing. On April 13, 2025, operators reduced reactor power to 84 percent to perform a control rod pattern adjustment. Following the control rod pattern adjustment and the 'C' condensate booster pump's return to service, operators raised reactor power to rated thermal power. On June 13, 2025, operators reduced reactor power to 84 percent for a planned control rod pattern adjustment. Operators raised reactor power to rated thermal power the next day. FitzPatrick remained at, or near, rated thermal power 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 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

### 71111.04 - Equipment Alignment

#### Partial Walkdown Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated system configurations during a partial walkdown of the containment atmosphere dilution (CAD) system on June 17, 2025.

#### Complete Walkdown Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated system configurations during a complete walkdown of the standby liquid control system on June 28, 2025.

### 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) Reactor building 369', fire area/zone IX/RB-1A on April 3, 2025

- (2) West cable tunnel 258', fire area/zone IC/CT-1 on April 8, 2025
- (3) Screenwell house and water treatment areas 235', 255' and 260', fire area/zone IB/SH-1 on May 15, 2025
- (4) Cable spreading room 272', fire area/zone VII/CS-1 on May 20, 2025
- (5) CAD shack 272', fire area/zone Yard CAD-1, CAD-2 on May 22, 2025

#### 71111.06 - Flood Protection Measures

##### Flooding Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated external flooding mitigation protections in manhole 1, the condensate storage tank south valve pit, and the condensate storage tank north valve pit on May 28, 2025.

#### 71111.07A - Heat Exchanger/Sink Performance

##### Annual Review (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness and performance of 93WE-1C, the 'C' emergency diesel generator (EDG) jacket water heat exchanger on June 3, 2025.

#### 71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

##### Requalification Examination Results (IP Section 03.03) (1 Sample)

- (1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam and the biennial written examinations completed on May 14, 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 operations personnel during a planned downpower to approximately 65 percent for a control rod pattern adjustment and turbine valve testing on April 11, 2025, and during a control rod pattern adjustment on June 6, 2025.

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

- (1) The inspectors observed and evaluated a simulator evaluation that included a loss of feedwater, a reactor water recirculation (RWR) seal failure and an unisolable main steam isolation valve leak on April 30, 2025.

#### 71111.12 - Maintenance Effectiveness

##### Maintenance Effectiveness (IP Section 03.01) (1 Sample)

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

- (1) Plant level events associated with a downpower on August 12, 2024, and for a feedwater heater tube rupture on April 8, 2025

#### 71111.13 - Maintenance Risk Assessments and Emergent Work Control

##### Risk Assessment and Management Sample (IP Section 03.01) (5 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) Elevated risk work on 'B' EDG during planned maintenance on April 22, 2025
- (2) Elevated risk work on high pressure coolant injection (HPCI) system during planned maintenance on April 28, 2025
- (3) Elevated risk work on 'A' and 'C' EDGs during planned maintenance to replace emergency service water flow restrictors on May 5, 2025
- (4) Emergent work during troubleshooting of the Class 1E 'A' 125 volt (V) direct current (DC) station battery due to a possible ground on the supply to the electro-hydraulic control system on May 14, 2025
- (5) Emergent work associated with troubleshooting of the 'B' RWR flow unit due to a downscale failure on May 21, 2025

#### 71111.15 - Operability Determinations and Functionality Assessments

##### Operability Determination or Functionality Assessment (IP Section 03.01) (1 Sample)

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

- (1) Class 1E 'A' 125 V DC station battery following -27.5 V ground on April 22, 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) (9 Samples)

- (1) 93TI-3B, 'B' EDG jacket water outlet temperature element and thermowell replacement following a leak on April 23, 2025
- (2) 93EDG-B, 'B' EDG following planned maintenance on April 24, 2025
- (3) 23PCV-112, HPCI turbine lube oil pressure control valve following planned maintenance on April 28, 2025
- (4) 23PCV-12, HPCI trip system pressure control valve following planned maintenance on May 8, 2025
- (5) 'A' RWR motor-generator set following planned replacement of the potentiometer on May 9, 2025

- (6) Class 1E 'A' 125 V DC station battery ground troubleshooting of the electro-hydraulic control system DC power supply filter on May 15, 2025
- (7) Class 1E 'A' 125 V DC station battery ground troubleshooting of the 71T-4 transformer overcurrent protection circuit on May 27, 2025
- (8) Class 1E 'A' 125 V DC station battery ground troubleshooting of the automatic voltage regulator supply breaker 71DC-A4 and supply wiring to 345 kilovolt motor operated disconnect 71MOD-10031 on June 6, 2025
- (9) Class 1E 'A' 125 V DC station battery ground troubleshooting of the automatic voltage regulator control and indication circuit on June 11 and 12, 2025

#### Surveillance Testing (IP Section 03.01) (2 Samples)

- (1) ISP-90-1A, 4KV Emergency 10500 Bus Undervoltage Relay (Degraded Voltage) Calibration, on April 8, 2025
- (2) ST-4N, High Pressure Coolant Injection (HPCI) Quick-start, Inservice, and Transient Monitoring Test (IST), on May 8, 2025

#### 71114.06 - Drill Evaluation

##### Required Emergency Preparedness Drill (1 Sample)

- (1) The inspectors evaluated the conduct of a routine FitzPatrick emergency response drill that included a hostile action, fuel damage and a failure of containment to isolate on June 10, 2025.

## **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, identifies the concentrations and quantities of radioactive materials, and assesses radiological hazards.

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

- (1) The inspectors evaluated how the licensee instructs workers on plant-related radiological hazards and the radiation protection requirements intended to protect workers from those hazards.

##### Contamination and Radioactive Material Control (IP Section 03.03) (2 Samples)

The inspectors observed/evaluated the following licensee processes for monitoring and controlling contamination and radioactive material:

- (1) Licensee surveys of potentially contaminated material leaving the radiologically controlled area
- (2) Workers exiting the radiologically controlled area through personnel contamination monitoring equipment

#### Radiological Hazards Control and Work Coverage (IP Section 03.04) (2 Samples)

The inspectors evaluated the licensee's control of radiological hazards for the following radiological work:

- (1) Used resin liner transfer to storage cask
- (2) Radiation protection lead shielding walkdown

#### High Radiation Area and Very High Radiation Area Controls (IP Section 03.05) (3 Samples)

The inspectors evaluated licensee controls of the following high radiation areas and very high radiation areas:

- (1) Locked high radiation area, 'B' hopper room in reactor building 272' elevation
- (2) Locked high radiation area, northeast condenser bay in reactor building 272' elevation
- (3) Locked high radiation area, 'B' reactor water cleanup pump room in reactor building 300' elevation

#### 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.

#### 71124.05 - Radiation Monitoring Instrumentation

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

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

- (1) Area radiation monitor channel 16 (cleanup heat exchanger room entry, reactor building)
- (2) Continuous air monitor S/N AMS-4-00913064 in reactor building 272' elevation
- (3) Bench counter model 3030P S/N 0019275
- (4) Portable area monitor WAM 500D in reactor building 326' elevation at the decay heat removal heat exchanger
- (5) Personnel contamination monitor ARGOS-5AB S/N 0090742

#### Calibration and Testing Program (IP Section 03.02) (10 Samples)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

- (1) Area radiation monitor channel 16 (cleanup heat exchanger room entry, reactor building)
- (2) Continuous air monitor S/N AMS-4-00913064 in reactor building 272' elevation
- (3) Bench counter model 3030P S/N 0019275
- (4) Portable area monitor WAM 500D in the reactor building 326' elevation at the decay heat removal heat exchanger
- (5) Personnel contamination monitor ARGOS-5AB S/N 0090742

- (6) Telepole S/N 0025715
- (7) E600 with REM Ball S/N 0022951
- (8) G-M Frisker Ludlum L-177 S/N 0022942
- (9) SAM-12 S/N 0091214
- (10) Main steam line radiation monitor 17RM-251A

Effluent Monitoring Calibration and Testing Program Sample (IP Section 03.03) (2 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

- (1) Off-gas stack flow transmitter (01-107FT-100)
- (2) Containment high range radiation monitor 27RM-104A

**OTHER ACTIVITIES – BASELINE**

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

- (1) For the period January 1, 2024 through December 31, 2024

BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

- (1) For the period January 1, 2024 through December 31, 2024

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

- (1) The inspectors reviewed the FitzPatrick corrective action program to identify potential trends in human performance that might be indicative of a more significant safety issue.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated the 'B' RWR flow unit downscale failure and the licensee's performance on May 21, 2025.

**INSPECTION RESULTS**

Minor Performance Deficiency	71152S
<b>Semiannual Trend</b>	
Minor Performance Deficiency: The inspectors identified a trend associated with human performance issues. Issues included the following:	

1. On September 8, 2024, as documented in the first quarter 2025 NRC inspection report 05000333/2025001 (ML25133A193), the inspectors identified a Green non-cited violation for station personnel's failure to follow a procedure step during a residual heat removal injection valve test during the September 2024 refuel outage. The failure to follow the procedure resulted in an overthrust condition that required additional inspection and analysis. (Issue Reports (IRs) 04862298 and 04800066)
2. On December 19, 2024, the station identified a failure to perform surveillance ISP-30-3, "Containment Hydrogen/Oxygen Analyzer 'B' Calibration." Specifically, Constellation staff did not recognize the required quarterly regulatory requirement prior to a preventive maintenance frequency change. The station entered Technical Requirement Manual (TRM) 3.0.C for the missed surveillance and conducted the surveillance successfully the next day. (IRs 04824953 and 04825048)
3. On March 12, 2025, maintenance staff did not lift the proper electrical lead prior to an EDG test due to failing to stop when unsure about a procedure step's clarity. As a result, during the 'C' EDG post-maintenance test run, the engine failed to reach proper speed. In addition, the inspectors identified a failure to complete a step to validate fuel injector linkage freedom of movement. The station corrected the procedure prior to the final post-maintenance test run and completed it successfully. In addition, maintenance staff validated that although the step was not complete, staff did validate fuel injector linkage was operating smoothly. (IR 04844796)
4. On May 1, 2025, the station identified a missed surveillance for the remote shutdown panel due to a failure to generate a work order after a preventive maintenance task change. As a result, the station entered Technical Specification Surveillance Requirement 3.0.3 and performed the test the same day. The results of the test were successful. (IR 04862267)
5. On June 16, 2025, engineering staff failed to recognize a potential overstressed condition for the reactor core isolation cooling steam supply outboard containment isolation valve, 13MOV-16. Specifically, following a weld repair under Engineering Change 642527, the American Society of Mechanical Engineers (ASME) Code B31.1 was not assessed to ensure compliance prior to implementation. Although the yield stress was exceeded, the ultimate yield stress was not, ensuring structural soundness of the repair. (IR 04872611)
6. On June 25, 2025, the inspectors identified a missed Offsite Dose Calculation Manual (ODCM) surveillance that was not performed within its required frequency. The station failed to identify the required biennial regulatory requirement prior to a preventive maintenance frequency change. The station successfully performed the surveillance the same day. (IR 0487610)

Screening: The inspectors determined the performance deficiency was minor. Based on the overall results of the semiannual trend review, the inspectors determined that Constellation had generally identified adverse trends before they could become more significant safety problems. The inspectors independently evaluated the deficiencies noted above for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues," and determined them to be minor, with the exception of issue 1.

## EXIT MEETINGS AND DEBRIEFS

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

- On July 31, 2025, the inspectors presented the integrated inspection results to Alex Sterio, Site Vice President, and other members of the licensee staff.
- On July 10, 2025, the inspectors presented the radiation monitoring instrumentation inspection results to Alex Sterio, Site Vice President, and other members of the licensee staff.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Procedures	EP-4	Boron Injection Using CRD System	5
		FM-18A	Flow Diagram Drywell Inerting C.A.D. and Purge System 27	57
		FM-21A	Flow Diagram Standby Liquid Control System 11	38
		OP-17	Standby Liquid Control System	55
		OP-37	Containment Atmosphere Dilution System	97
71111.05	Fire Plans	PFP-PWR02	West Cable Tunnel Elev. 258' Fire Area/Zone IC/CT-1	07
		PFP-PWR11	Cable Spreading Room, Elev. 272' Fire Area/ Zone VII/CS-1	4
		PFP-PWR28	Reactor Building Elev. 369' Fire Area/Zone IX/RB-1A	10
		PFP-PWR34	Screenwell House and Water Treatment Area/Elev. 235', 255' and 260' Fire Area/ Zone IB/SH-1	
		PFP-PWR50	Containment Atmosphere Dilution (CAD) Shack, Elev. 272' Fire Area/ Zone Yard CAD-1, CAD-2	2
71111.07A	Procedures	ER-AA-340	GL 89-13 Program Implementing Procedure	11
	Work Orders	05360649		
71111.13	Corrective Action Documents	04858059		
		04867575		
		04868062		
	Work Orders	05261515		
		05172358		
		05261516		
		05671309		
71111.15	Corrective Action Documents	04834397		
		04858059		
	Procedures	AOP-22	DC Power System A Ground Isolation	37
71111.24	Corrective Action Documents	04821242		
		04821243		
		04859459		
		04859794		
		04861319		
		04862423		
		04862637		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		04862663		
	Procedures	ISP-90-1A	4KV Emergency 10500 Bus Undervoltage Relay (Degraded Voltage) Calibration	2
		ST-4N	HPCI Quick-Start, Inservice, and Transient Monitoring Test (IST)	86
		ST-9BB	EDG B and D Full Load Test and ESW Pump Operability Test	028
	Work Orders	04775630		
		05131950		
		05172358		
		05343997		
		05531241		
		05603182		
		05603524		
		05603525		
		05640517		
05654679				
71151	Procedures	LS-AA-2090	Monthly Data Elements for NRC ROP Indicator - Reactor Coolant System (RCS) Specific Activity	5
71152S	Corrective Action Documents	04844022		
	Procedures	ST-9BA	EDG A and C Full Load and ESW Pump Operability Test	29
		ST-9R	EDG System Quick-Start Operability Test and Offsite Circuit Verification	13
	Work Orders	05626419		
05631749				
71153	Corrective Action Documents	04867575		