



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

May 5, 2022

Mr. 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 05000333/2022001 AND INDEPENDENT SPENT FUEL
STORAGE INSTALLATION INSPECTION REPORT 07200012/2022001**

Dear Mr. Rhoades:

On March 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at James A. FitzPatrick Nuclear Power Plant. On April 28, 2022, the NRC inspectors discussed the results of this inspection with Mr. Timothy Peter, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. 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 I; the Director, Office of Enforcement; and the NRC Resident Inspector at James A. FitzPatrick Nuclear Power Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; and the NRC Resident Inspector at James A. FitzPatrick Nuclear Power Plant.

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,

Erin E. Carfang, Chief
Projects Branch 1
Division of Operating Reactor Safety

Docket No. 05000333 and 07200012
License No. DPR-59

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: JAMES A. FITZPATRICK NUCLEAR POWER PLANT – INTEGRATED INSPECTION REPORT 05000333/2022001 AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION INSPECTION REPORT 07200012/2022001 DATED MAY 5, 2022

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

Docket Numbers: 05000333 and 07200012

License Numbers: DPR-59

Report Numbers: 05000333/2022001 and 0700012/2022001

Enterprise Identifiers: I-2022-001-0045
I-2022-001-0102

Licensee: Constellation Energy Generation, LLC

Facility: James A. FitzPatrick Nuclear Power Plant

Location: Oswego, NY

Inspection Dates: January 1, 2022 to March 31, 2022

Inspectors: E. Miller, Senior Resident Inspector
J. England, Resident Inspector
H. Anagnostopoulos, Senior Health Physicist
B. DeBoer, Senior Health Physicist
E. Dipaolo, Senior Reactor Inspector
S. Haney, Senior Project Engineer
J. Hawkins, Senior Project Engineer
N. Mentzer, Reactor Inspector
C. Swisher, Project Engineer

Approved By: Erin E. Carfang, 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

Failure to Perform Preventative Maintenance of Reactor Building Ventilation Fire Damper 9 (66FD-9)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000333/2022001-01 Open/Closed	[P.2] - Evaluation	71111.12
The inspectors identified a Green finding and associated non-cited violation (NCV) of FitzPatrick License Condition 2.C.(3) for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, contrary to a Fire Plan Impact Review in June 2007, which justified removing the functionality test of all fire dampers based on assurance that preventive maintenance would be performed, FitzPatrick subsequently stopped performing preventive maintenance of reactor building ventilation fire damper 9 (66FD-9) in November 2010.			

Additional Tracking Items

None.

PLANT STATUS

FitzPatrick began the inspection period at rated thermal power. On January 18, 2022, operators reduced reactor power to 84 percent to perform reactor fuel defect identification testing. Operators restored power to rated on the same day. On February 8, 2022, operators reduced reactor power to 56 percent to determine the location of a reactor fuel leak. Following identification of the leak and suppression, operators returned the unit to rated power on February 12, 2022. On February 12, 2022, following return to rated power, operators reduced reactor power to 75 percent to perform a control rod pattern adjustment. On February 13, 2022, operators restored reactor power to rated following the control rod pattern adjustment. On March 15, 2022, operators reduced reactor power to 72 percent to perform a main condenser tube leak repair. Operators restored the unit to rated power on March 16, 2022. 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," conducted routine reviews using IP 71152, "Problem Identification and Resolution," 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.

On February 1, 2022, the operating license for James A. FitzPatrick Nuclear Power Plant held by Exelon Generation Company, LLC was transferred to Constellation Energy Generation, LLC (Constellation) as documented in the associated license amendments (ADAMS Accession No. ML22021B660). While some or all of the inspections documented in this report were performed while the license was held by Exelon Generation Company, LLC, this report will refer to the licensee as Constellation throughout.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the adequacy of the overall preparations to protect risk-significant systems from a wind chill warning and winter storm watch on January 14, 2022.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (2 Samples)

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

- (1) 'A' core spray system on March 2 and 3, 2022
- (2) Control room ventilation system during Eddy current testing on chiller 70AHU-19B on March 30, 2022

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) Cable spreading room 272' elevation, fire area/fire zone VII/CS-1, on February 11, 2022
- (2) Radwaste building 250' elevation, fire area/fire zone XIX/RW-1, on February 11, 2022
- (3) Radwaste 272' and 279' elevations, fire area/fire zone XIX/RW-1, on February 11, 2022
- (4) Radwaste control room 284' elevation, fire area/fire zone XIX/CR-2, on February 11, 2022
- (5) Radwaste 298' elevation, fire area/fire zone XIV/RW-1, on February 11, 2022

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 operations personnel during a downpower to assess a potential fuel leak on January 18, 2022, and during leak suppression testing on February 9, 2022.

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

- (1) The inspectors observed and evaluated operator performance in the simulator which included a local power range monitor failure, a safety-related power supply failure, a stuck open safety relief valve, and a loss of coolant accident on February 1, 2022.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 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) East crescent area ventilation supply fire damper 66FD-9 on January 27, 2022
- (2) Main steam line radiation monitors on February 18, 2022

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) 'C' condensate and 'C' condensate booster pump removal from service due to flow induced vibration at reduced power on February 9, 2022
- (2) Emergent downpower due to elevated main condenser tube leakage on March 15, 2022
- (3) Elevated risk during 71T-2 115kV transformer planned maintenance on March 29, 2022

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (8 Samples)

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

- (1) Impact on low pressure coolant injection due to slow torus cooling valve stroke time on January 3, 2022
- (2) 66FD-9, east crescent area ventilation supply fire damper on January 19, 2022
- (3) 70MOD-100 relay room ventilation supply damper on January 27, 2022
- (4) High pressure coolant injection system turbine casing leak on February 7, 2022
- (5) 'A' core spray following failure to start on March 1, 2022
- (6) 'A' and 'B' low pressure coolant injection battery room temperature low following trip of auxiliary boiler on March 23, 2022
- (7) 'B' low pressure coolant injection battery room supply air fire damper 66DMP-F2C due to uneven damper standby position on March 24, 2022
- (8) 'C' emergency diesel generator loose exhaust expansion joint bolts on March 28, 2022

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) Temporary Modification: 70TCV-123A Control Room/Relay Room Chiller Air Handling Unit

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (5 Samples)

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

- (1) 70MOD-100 control room emergency ventilation system inlet damper on January 28, 2022
- (2) 'B' rod block monitor following replacement of failed null and gain circuit cards on February 9, 2022
- (3) 76MPX-3 fire detection multiplexer following power supply replacement on February 15, 2022
- (4) 'A' core spray pump following main control room switch elevated resistance troubleshooting on March 1, 2022
- (5) 'A' core spray pump control room switch 14S-S5A following replacement on March 18, 2022

71111.22 - Surveillance Testing

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

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

- (1) ST-43A, Remote Shutdown Panel 25 RSP Component Operation and Isolation Verification on March 9, 2022
- (2) ST-43C, Remote Shutdown Panel 25ASP-2 Component Operation and Isolation Verification on March 10, 2022
- (3) ST-21E, Main Turbine Stop Valves Limit Switch Instrument Functional Test on March 15, 2022

Inservice Testing (IP Section 03.01) (2 Samples)

- (1) ST-4N, High Pressure Coolant Injection Quick-Start, Inservice, and Transient Monitoring Test on March 8, 2022
- (2) ST-24J, Reactor Core Isolation Cooling Flow Rate and Inservice Test on March 17, 2022

71114.06 - Drill Evaluation

Select Emergency Preparedness Drills and/or Training for Observation (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated a simulator scenario that included a declaration of alert and site area emergency due to a loss of coolant accident on February 1, 2022.

RADIATION SAFETY

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

Permanent Ventilation Systems (IP Section 03.01) (1 Sample)

The inspectors evaluated the configuration of the following permanently installed ventilation systems:

- (1) Technical support center filtered ventilation system

Temporary Ventilation Systems (IP Section 03.02) (1 Sample)

The inspectors evaluated the configuration of the following temporary ventilation systems:

- (1) Portable high efficiency particulate air ventilation unit in the radioactive waste facility, 272' elevation at the Advanced Liquid Processing System (ALPS) skid room

Use of Respiratory Protection Devices (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated the licensee's use of respiratory protection devices.

Self-Contained Breathing Apparatus for Emergency Use (IP Section 03.04) (1 Sample)

- (1) The inspectors evaluated the licensee's use and maintenance of self-contained breathing apparatuses.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (1 Sample)

- (1) January 1, 2021 through December 31, 2021

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (1 Sample)

- (1) January 1, 2021 through December 31, 2021

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (1 Sample)

- (1) January 1, 2021 through December 31, 2021

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) Issue Report (IR) 04448166 - Reactor Building East Crescent Fire Damper 66FD-9 Preventive Maintenance on January 28, 2022
- (2) IR 04369253 and IR 04369255 - Main Steam Isolation Valves (MSIV) 29-AOV-86C and -86D Failed Surveillance Test Stroke Times, on February 28, 2022

71153 - Follow Up of Events and Notices of Enforcement Discretion

Personnel Performance (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated operators during a downpower to resolve elevated main condenser tube leakage on March 15, 2022.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855 - Operation of an Independent Spent Fuel Storage Installation (ISFSI)

Operation of an ISFSI (1 Sample)

- (1) The inspectors evaluated Constellation’s activities related to long-term operation and monitoring of their ISFSI on March 7–10, 2022.

INSPECTION RESULTS

Failure to Perform Preventative Maintenance of Reactor Building Ventilation Fire Damper 9 (66FD-9)			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000333/2022001-01 Open/Closed	[P.2] - Evaluation	71111.12
The inspectors identified a Green finding and associated non-cited violation (NCV) of FitzPatrick License Condition 2.C.(3) for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, contrary to a Fire Plan Impact Review in June 2007, which justified removing the functionality test of all fire dampers based on assurance that preventive maintenance would be performed, FitzPatrick subsequently stopped performing preventive maintenance of reactor building ventilation fire damper 9 (66FD-9) in November 2010.			
<u>Description:</u> Fire damper 66FD-9 provides a fire boundary between risk-important safety-related equipment rooms. This damper is normally open, but in the event of a fire in the east crescent of the reactor building or a fire in the supply air ventilation duct where 66FD-9 is located, a fusible link holding the damper open melts, then an internal spring draws the damper into the closed position. Fire damper closure prevents a fire spreading from one area to another.			
On June 6, 2007, FitzPatrick issued a revision to surveillance requirements in Technical Requirements Manual (TRM) 3.7.M, “Fire Barrier Penetrations,” to perform a visual inspection of fire dampers once every 24 months. Previously, FitzPatrick was required to perform a visual inspection and functionality test in accordance with Technical Requirement			

Surveillance (TRS) 3.7.M.3 on reactor building ventilation fire dampers. As part of the TRM revision, FitzPatrick performed a Fire Protection Impact Review in accordance with EN-DC-128, "Fire Protection Impact Reviews," Revision 0. As part of the evaluation, FitzPatrick justified removing the requirement to perform functionality tests because the fire dampers would receive preventive maintenance. The preventive maintenance in addition to the visual inspection performed for TRS 3.7.M.3 would ensure the fire dampers remain free to function during a fire. Specifically, the evaluation states, "in addition to the visual inspection of the dampers, preventive maintenance tasks will be scheduled to ensure they remain free to function during a fire. This maintenance activity will include cleaning and lubrication of the track, springs, and other moving parts. If any minor damage or deficiency is noted that calls into question the operability of the damper, the damper will be functionally tested."

On September 23, 2021, FitzPatrick generated IR 04448166 documenting that the preventive maintenance had been retired for fire damper 66FD-9 and completed a work group evaluation (WGE) to establish the cause, evaluate functionality, and develop corrective actions. IR 04448166 stated that on November 16, 2010, FitzPatrick retired the preventive maintenance task for fire damper 66FD-9 by reclassifying the component as "Run-To-Maintenance." The last time fire damper 66FD-9 underwent any preventive maintenance was on August 6, 2007. The WGE examined the equipment reliability classification and maintenance strategy in accordance with ER-AA-200, "Preventive Maintenance," Revision 6. FitzPatrick determined in the WGE that the damper should remain classified as Run-to-Maintenance and no preventive maintenance shall be performed based on a fleet performance-centered maintenance (PCM) template for heating, ventilation, and air conditioning dampers and ducting, due to the 24-month visual inspection already in place. Furthermore, the WGE determined that the damper remained functional due to the completion of the 24-month visual inspection in October 2020.

The inspectors reviewed the WGE, and the actions assigned to the corrective action product. The inspectors identified that associated actions assigned in the IR conflicted with the WGE determination. Specifically, action item 10 in IR 04448166 was assigned to assess the maintenance classification of the fire damper, and determined a classification of 7, because age-related degradation of the spring should be addressed by regular maintenance. However, following inspector questioning about the discrepancy, the station re-performed an evaluation of the equipment classification and maintenance strategy. The station subsequently determined the fire damper would remain classified as 9, Run-To-Maintenance. The inspectors' review determined that the station's previously determined classification of 7 and the need for periodic preventive maintenance to be reasonable. Procedure ER-AA-200, "Preventive Maintenance Program," Revision 6, step 4.3 references the use of Attachment 5, "Maintenance Strategy Development Guidance." Information that was to be considered per Attachment 5 included operating experience, vendor information, and site commitments. The WGE did not consider the input from action item 9 of IR 04448166, in that other stations do perform functional testing of fire dampers. Also, the WGE failed to identify that the referenced PCM template for heating, ventilation, and air conditioning dampers and ducting specifically states it does not apply to fire dampers. The station also did not consider the information in the Fire Protection Impact Review performed for a revision to TRS 3.7.M.3, which required preventive maintenance to be performed to support the elimination of functional testing. Lastly, the station did not consider that fire damper 66FD-9 is the only fire damper in the reactor building ventilation system with similar TRM surveillance requirements that is not receiving any preventive maintenance.

The inspectors determined that FitzPatrick correctly identified the problem, and captured the issue in IR 04448166, however, did not adequately assess and evaluate functionality.

Specifically, the justification in the TRM revision, "Detailed Fire Protection Program Review," required that the dampers receive preventive maintenance in addition to a visual inspection to meet the intent of the surveillance requirement and to ensure functionality.

Corrective Actions: FitzPatrick generated an IR to document the deficiency. FitzPatrick performed an extent-of-condition review to determine if other dampers are improperly coded, and re-evaluated fire damper 66FD-9 to ensure it is properly coded.

Corrective Action References: IR 04448166

Performance Assessment:

Performance Deficiency: The inspectors determined that FitzPatrick's failure to perform preventive maintenance on fire damper 66FD-9, as required by the justification made in the TRM revision, "Detailed Fire Protection Program Review," was a performance deficiency that was reasonably within FitzPatrick's ability to foresee and prevent and should have been corrected.

Screening: The inspectors determined the performance deficiency was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. In addition, the inspectors determined this issue is similar to IMC 0612 Appendix E example 13.a. Specifically, absent NRC's intervention, FitzPatrick's failure to establish and perform appropriate preventive maintenance can lead to in-service component deterioration and resultant failures of fire dampers to perform their fire protection function.

Significance: The inspectors assessed the significance of the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection and Post - Fire Safe Shutdown SDP." This issue screened to very low safety significance (Green) in Phase 1, Task 1.4.3, "Fire Confinement," because it was assigned a "Low Degradation Rating," as the fire damper 66FD-9 was not in a maintenance inspection program.

Cross-Cutting Aspect: P.2 - Evaluation: The organization thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, after performing multiple recent evaluations of the maintenance strategy, the station failed to adequately address available information such as the applicability of the PCM template, operating experience, Fire Impact Review, and that this damper is the only damper in the reactor building ventilation system with the similar TRM surveillance requirements that does not receive preventive maintenance.

Enforcement:

Violation: FitzPatrick Operating License Condition 2.C(3) requires, in part, that Constellation shall implement and maintain in effect provisions of the approved fire protection program as described in the Final Safety Analysis Report for the facility. FitzPatrick Final Safety Analysis Report Section 9.8.5, "Fire Protection Program," states, in part, that the TRM will be used to implement the FitzPatrick Fire Protection Program. FitzPatrick Operating License Condition 2.C(3) also states that Constellation may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire. On August 6, 2007, Constellation performed a Fire Protection Impact Review in accordance with License Condition 2.C(3) and EN-DC-128, "Fire Protection Impact Reviews," Revision 0. As part of the evaluation, FitzPatrick justified removing the requirement to perform functionality tests because the fire dampers would receive preventive maintenance.

Contrary to the above, since November 2010, FitzPatrick stopped performing preventive maintenance of reactor building ventilation fire damper 9 (66FD-9). Specifically, FitzPatrick last performed preventive maintenance for fire damper 66FD-9 on August 6, 2007.

Enforcement Action: This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: IR 04369253 and IR 04369255, Main Steam Isolation Valves (MSIV) 29-AOV-86C and -86D Failed Surveillance Test Stroke Times	71152A
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The inspectors reviewed Constellation's corrective actions, Part 21 evaluation, failure analysis, and licensee event report (LER) associated with the failure of two outboard MSIV surveillance test stroke times in September 2020 documented in IRs 04369253 and 04369255.

The inspectors verified Constellation engineering staff replaced the MSIV actuator air solenoid valves and retested the MSIVs satisfactorily prior to returning the valves to service within the applicable technical specification action statement. Constellation staff sent the associated air solenoid valves to the vendor to perform a failure analysis. EA-006-21, Revision 2, completed in November 2021, concluded foreign material negatively impacted the internal components of the air solenoid valves resulting in a delay in control air venting and the subsequent slow MSIV stroke times. Constellation staff reported the event in accordance with 10 CFR 50.73(a)(2)(vii) in LER 2021-003 dated January 14, 2022. Corrective actions included in the LER discussed replacing the air solenoid valves for the two associated MSIVs, retesting the valves satisfactorily, and planning to replace six air solenoid valves in the upcoming refueling outage in 2022 with a sample of these replacements being sent for additional failure analyses.

Additional corrective actions in IR 04369253 and IR 04369255 discussed evaluating preventive maintenance changes to equipment refurbishment frequency and preventive maintenance procedure changes to prevent foreign material during Constellation maintenance activities on the MSIV solenoid valves. The NRC inspectors identified one corrective action regarding preventive maintenance changes to equipment refurbishment frequency was closed prior to preventive maintenance change approval. This is considered a minor performance deficiency associated with the failure to follow PI-AA-125, "Corrective Action Program," step 4.7.1 which states a corrective action assignment can be closed to another corrective action, work order, or when completed. Constellation staff initiated IR 04487009 to evaluate the issue and reopened the corrective action tracking assignment. Also, the NRC inspectors identified a minor performance deficiency associated with reviewing and evaluating fleet preventive maintenance template revisions that recommend changes to safety-related equipment maintenance frequency. Specifically, at the time of the inspection, Constellation staff had not yet completed a review of a revision to the fleet preventive maintenance template for MSIVs, approved in May 2020, that recommended MSIV actuator equipment refurbishment at a shorter frequency than currently implemented at FitzPatrick. Procedure ER-AA-200-1004 details reviewing fleet preventive maintenance templates in a timely manner and ER-AA-200, "Preventive Maintenance Program," step 4.3.6 directs that all preventive maintenance deviations be documented with a technical basis. Constellation staff initiated IR 04486528 to document and evaluate the issue and extent of condition.

Due to the similarity of MSIV failures, the NRC inspectors reviewed Constellation's evaluation of LER 05000220, 05000410/2020-002-01, dated August 31, 2020, where Nine Mile Point Nuclear Station reported a 10 CFR Part 21 notification related to delayed MSIV air pack

response times due to a build-up of corrosion product during operation and foreign material that accumulated during equipment refurbishment by the vendor. Constellation staff documented evaluation of this Part 21 notification in IR 04407914 and identified four potentially impacted MSIV actuators currently in service and one actuator in stock. The four actuators in service were tested satisfactorily during the last surveillance tests in September 2020. Corrective actions included revising purchase order requirements with notes to help mitigate repeat refurbishment issues, inspecting and refurbishing the one actuator in stock, and initiating work orders to replace the four potentially impacted actuators in service during the next refueling outage in 2022.

The NRC inspectors did not identify any findings or violations of more than minor significance during this inspection.

EXIT MEETINGS AND DEBRIEFS

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

- On April 28, 2022, the inspectors presented the integrated inspection results to Mr. Timothy Peter, Site Vice President, and other members of the licensee staff.
- On March 28, 2022, the inspectors presented the ISFSI operational inspection results to Mr. Timothy Peter, Site Vice President, and other members of the licensee staff.
- On March 24, 2022, the inspectors presented the problem identification and resolution MSIV failed surveillance test stroke times inspection results to Mr. Richard Sullivan, Regulatory Assurance Manager, and other members of the licensee staff.
- On February 22, 2022, the inspectors presented the airborne radioactivity inspection results to Mr. Alex Sterio, Plant Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
60855	Miscellaneous	JAF-72SCN-19-004	Allow Short-Term ISFSI Cask Storage in the RB Track Bay, MPC Transfer and HI-STORM Movement	1
		JAF-RPT-SFS-04329	10 CFR 72.212 Evaluation Report	14
71111.01	Procedures	AOP-13	Severe Weather	39
		OP-AA-108-111-1001	Severe Weather and Natural Disaster Guidelines	23
		SY-AA-101-146	Severe Weather Preparation and Response	3
71111.04	Corrective Action Documents Resulting from Inspection	04489182		
		04489210		
	Drawings	FB-35E	Flow Diagram Control Room Area Service & Chilled Water System 70	38
		FM-23A	Flow Diagram Core Spray System 14	49
	Procedures	OP-14	Core Spray System	42
		OP-55A	Control and Relay Room Refrigeration Water Chiller	29
71111.05	Fire Plans	PFP-PWR11	Cable Spreading Room 272' Elevation, Fire Area/Fire Zone VII/CS-1	3
		PFP-PWR36	Radwaste Building 250' Elevation, Fire Area/Fire Zone XIX/RW-1	1
		PFP-PWR38	Radwaste 272' and 279' Elevations, Fire Area/Fire Zone XIX/RW-1	2
		PFP-PWR39	Radwaste Control Room 284' Elevation, Fire Area/Fire Zone XIX/CR-2	4
		PFP-PWR40	Radwaste 298' Elevation, Fire Area/Fire Zone XIV/RW-1	2
71111.11Q	Procedures	NF-AB-431	Power Suppression Testing	9
		OP-3	Condensate System	80
		OP-65	Startup and Shutdown Procedure	132
71111.12	Corrective Action Documents	04211824		
		04291900		
		04301094		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		04390434		
		04444069		
		04448166		
		04462643		
	Drawings	1.78-90	Process Radiation Monitoring System	6
	Miscellaneous	JAF-21-0109	Removal of Channel Select Switch for Main Steam Line Radiation Monitor Recorder	
	Procedures	EN-MS-S-009-JAF	JAF Safety System Function Sheets	
		ER-AA-320	Maintenance Rule Implementation per NEI 18-10	0
		ER-AA-320-1001	Maintenance Rule 18-10 - Scoping	0
Work Orders	04985330			
71111.13	Corrective Action Documents	04490298		
	Procedures	OP-3	Condensate System	80
		OP-65	Startup and Shutdown Procedure	132
71111.15	Corrective Action Documents	04213122		
		04381156		
		04428931		
		04448166		
		04474111		
		04481502		
		04484813		
		04488179		
	Corrective Action Documents Resulting from Inspection	04476529		
	Drawings	2.03-4	16-inch HPCI Steam Stop Valve	
	Engineering Changes	631583	Procedurally Controlled Temporary Configuration Change (PCTCC) for Temporary Heating in Crescents and LPCI Battery Rooms	0
	Fire Plans	PFP-PWR27	Reactor Building Elevation 344' Fire Area IX/Fire Zone RB-	4

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			1A	
	Miscellaneous	DBD-066	Design Basis Document for the Reactor Building Heating, Ventilation, and Air Conditioning Systems	11
		Vendor Manual	T147-0002, Nuclear Maintenance Applications Center Terry Turbine Maintenance Guide HPCI Application	0
	Procedures	IMP-23.12	HPCI Stop Valve Steam Balance Chamber Adjustment	15
		MP-093.16	EDG Turbocharger Replacement	8
		OP-51A	Reactor Building Ventilation and Cooling System	54
	Work Orders	00206056		
		00209664		
		04880228		
		05239537		
71111.18	Corrective Action Documents	04471808		
	Procedures	LS-AA-104	Exelon 50.59 Review Process	12
		LS-AA-104-1002	50.59 Applicability Review Form	7
		LS-AA-104-1003	50.59 Screening Form	4
71111.19	Corrective Action Documents	04478583		
		04481502		
	Corrective Action Documents Resulting from Inspection	04475775		
	Drawings	1.64-30	Elementary Diagram Core Spray System	R
	Miscellaneous	Work Request	01509654	
	Procedures	ISP-24B	Rod Block Monitor Instrument Functional Test/Calibration	5
		MA-AA-716-003	Tool Pouch/Minor Maintenance	013
		MA-AA-716-010	Maintenance Planning	32
		ST-76A	Fire Protection System Monthly Checks	24
	Work Orders	04884256		
		04984152		
		05231548		
		05235424		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.22	Drawings	FM-25A	Flow Diagram High Pressure Coolant Injection System 23	68
	Procedures	ST-21E	Main Turbine Stop Valves Limit Switch Instrument Functional Test	23
		ST-24J	RCIC Flow Rate and Inservice Test (IST)	54
		ST-43A	Remote Shutdown Panel 35RSP Component Operation and Isolation	12
		ST-43A	Remote Shutdown Panel 35RSP Component Operation and Isolation	13A
		ST-43C	Remote Shutdown Panel 25ASP-2 Component Operation and Isolation Verification	13
		ST-4N	HPCI Quick Start, Inservice, and Transient Monitoring Test	80
	Work Orders	4977045-01		
4982609-01				
71151	Procedures	LS-AA-2001	Collecting and Reporting of NRC ROP Performance Indicator Data	17
		LS-AA-2030	Monthly Data Elements for NRC ROP Indicator - Unplanned Power Changes per 7000 Critical Hours	6
71152A	Corrective Action Documents	04369253		
		04369255		
		04407914		
	Corrective Action Documents Resulting from Inspection	04486528		
		04487009		
	Miscellaneous	Commitment Change CCR-07-005, Action Number ACT-86-00108	Test Fire Dampers with Air Flow Revision 3 to F-ST-76V	05/07/2007
		Fire Protection Impact Review	Change TRM TRS 3.7.M.3 to Eliminate the Fire Damper Functional Test	05/04/2007
	Procedures	EN-DC-128	Fire Protection Impact Reviews	1
		ER-AA-200	Preventive Maintenance Program	6
ER-AA-200-1001		Equipment Classification	6	

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		PI-AA-125	Corrective Action Program (CAP) Procedure	7