



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

October 27, 2021

Mr. David Rhoades
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION – INTEGRATED INSPECTION
REPORT 05000254/2021003 AND 05000265/2021003

Dear Mr. Rhoades:

On September 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Quad Cities Nuclear Power Station. On October 12, 2021, the NRC inspectors discussed the results of this inspection with Mr. B. Wake, Acting 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.

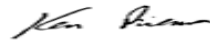
If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk,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

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 III; and the NRC Resident Inspector at Quad Cities Nuclear Power Station.

The NRC identified an administrative error in NRC Integrated Inspection Report 05000254/2021002; 05000265/2021002 (ADAMS Accession Number ML21217A156), dated August 9, 2021. Specifically, the sample for Inspection Procedure (IP) 71111.11Q, "Licensed Operator Requalification Program and Licensed Operator Performance," was inadvertently listed under IP Section 03.01. It should have been listed under IP Section 03.02. Since the error has been corrected in the NRC's internal tracking system, a corrected report will not be issued.

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 Riemer, Kenneth
on 10/27/21

Kenneth R. Riemer, Chief
Branch 1
Division of Reactor Projects

Docket Nos. 05000254 and 05000265
License Nos. DPR-29 and DPR-30

Enclosure:
As stated

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Letter to David Rhoades from Kenneth Riemer dated October 27, 2021.

SUBJECT: QUAD CITIES NUCLEAR POWER STATION – INTEGRATED INSPECTION REPORT 05000254/2021003 AND 05000265/2021003

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

Docket Numbers: 05000254 and 05000265

License Numbers: DPR-29 and DPR-30

Report Numbers: 05000254/2021003 and 05000265/2021003

Enterprise Identifier: I-2021-003-0103

Licensee: Exelon Generation Company, LLC

Facility: Quad Cities Nuclear Power Station

Location: Cordova, IL

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

Inspectors: J. Cassidy, Senior Health Physicist
Z. Coffman, Resident Inspector
C. Hunt, Senior Resident Inspector
C. Mathews, Illinois Emergency Management Agency

Approved By: Kenneth R. Riemer, Chief
Branch 1
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 Quad Cities Nuclear 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

| Degraded Unit 2 Emergency Diesel Generator Fire Door | | | |
|---|---|-----------------------|----------------|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Mitigating Systems | Green NCV 05000254,05000265/2021003-01 Open | [P.2] - Evaluation | 71111.05 |
| The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1 for the failure to establish compensatory fire watches, in accordance with QCAP 1500-01, "Administrative Requirements for Fire Protection," for a degraded condition on the Unit 2 EDG room fire door. | | | |

Additional Tracking Items

None.

PLANT STATUS

Unit 1

The unit began the inspection period at full-rated thermal power. On the morning of July 1, 2021, the station performed an unplanned downpower to 75 percent to perform repairs on the 2A feedwater regulating valve. The unit returned to full-rated thermal power on July 2, 2021. For all other periods, the unit was at full-rated thermal power with the exception of short-term power reductions for control rod sequence exchanges, testing, and as requested by the transmission system operator.

Unit 2

The unit began the inspection period at full-rated thermal power. On September 19, 2021, the station performed a planned downpower to 90 percent to recover a control rod following troubleshooting for an indication issue. For all other periods, the unit was at full-rated thermal power, with the exception of short-term power reductions for control rod sequence exchanges, testing, and as requested by the transmission system operator.

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 (summer/hot weather) prior to the onset of extreme temperatures for the following systems:

Unit 1 and Unit 2 service water and circulating water systems on July 7, 2021

External Flooding Sample (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated that flood protection barriers, mitigation plans, procedures, and equipment are consistent with the licensee's design requirements and risk analysis assumptions for coping with external flooding on August 17, 2021.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

- (1) Instrument air on August 26, 2021
- (2) Unit 1 high pressure coolant injection following surveillance testing on September 8, 2021
- (3) 1B control rod drive pump partial walkdown during a 1A control rod drive pump work window on September 15, 2021
- (4) Reactor core isolation cooling (RCIC) partial walkdown on September 2, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (6 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 Zone 9.2, Unit 2 diesel generator room, elevation 595'-0", on August 3, 2021
- (2) Fire Zone 5.0, safe shutdown makeup pump room, elevation 595'-0", on August 4, 2021
- (3) Fire Zone 8.2.4, Unit 1 cable tunnel, elevation 580'-0", on August 11, 2021
- (4) Fire Zone 6.3, services building, elevation 595'-0", auxiliary electric room, on July 24, 2021
- (5) Fire Zone 4.0, services building, elevation 595'-0", old computer room, on July 26, 2021
- (6) Fire Zone 8.2.5, Unit 2 cable tunnel, elevation 580'-0", on August 11, 2021

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) 1A residual heat removal room on August 17, 2021

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Integrated Inspection Report 05000254/2021002 and 05000265/2021002 credited an inspection sample to IP 71111.11Q Section 03.01 rather than Section 03.02. The Reactor Program System has been updated to properly account for that inspection sample under IP Section 03.02.

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 the replacement of reactor protection system relay 2-0590-124A on September 3, 2021.

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

- (1) The inspectors observed and evaluated licensed operator performance during an out-of-the-box evaluation on August 10, 2021.

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 remain capable of performing their intended function:

- (1) A(3) maintenance rule assessment on August 11, 2021

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure that quality control verifications were properly specified in accordance with the Quality Assurance Program and were implemented as specified in the following work orders:

- (1) Work Order 1442899, "Replace U1 Outboard MSIV [main steam isolation valve] Air Lines per EC [engineering change] 387022"
Work Order 5080910, "Permanent Repair of U-1 EDG [emergency diesel generator] Cooling Water Line 1-3958-6"
Work Order 5138188, "Q1R26 Pin Hole Leak on DGCW [diesel generator cooling water] Line Downstream of 1-3999-885"
Work Order 4802580, "Open and Eddy-Current Test 1C1 Feedwater Heaters"

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (6 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) Action Request 4432710, "Hydraulic Leak on 2A FRV [feedwater relief valve]"
- (2) E-2 certification meeting and risk management for work week 07/26/2021 on July 14, 2021
- (3) E-2 certification meeting and risk management for work week 08/09/2021 on July 28, 2021
- (4) Action Request 4445201, "RCIC Isolation During Performance of MA-QC-IM-1-13201"
- (5) Unit 2 rod F-12 unexpected loss of indication on September 13, 2021
- (6) 1/2 EDG work window on September 20, 2021

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

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

- (1) Action Request 4438821, "U2 RWCU [reactor water cleanup] Regen Hx [heat exchanger] Leak"
- (2) Action Request 4440916, "Received 902-8 B9 125 V Battery Ground Alarm"
- (3) Action Request 4438965, "Unit 1 to Unit 2 HPCI [high pressure coolant injection] Door Surface Latch (Fire Door 192)"
- (4) Engineering Change 634714, "Jumper CCST [contaminated condensate storage tank] Level Switches to Allow Draining of CCST 'B' Tank to Torus"
- (5) Action Request 4441227, "NRC ID: Walk down Concerns"

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (7 Samples)

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

- (1) QCOS 1000-28, "RHR [residual heat removal] Service Water Pump Comprehensive/Performance Test," Revision 27a, following 1A RHRSW [residual heat removal service water] LP [low pressure] pump overhaul on July 22, 2021
- (2) QCOS 1000-27, "RHR Pump Comprehensive Performance Test," Revision 22, following scheduled work window on the 2B RHR and RHRSW loop on July 28, 2021
- (3) Unit 2 EDG starting air post-maintenance testing following a planned work window on August 3, 2021
- (4) security diesel run following planned maintenance on August 4, 2021
- (5) Unit 1 EDG run following Bus 14-1 undervoltage test on September 13, 2021
- (6) Unit 1/2 EDG operability run following planned work window on September 24, 2021
- (7) Unit 1/2 EDG operability run following troubleshooting and repair on September 28, 2021

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

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

- (1) Safe shutdown makeup pump QCOS 2900-1, "Safe Shutdown Makeup Pump Flow Rate Test," on August 26, 2021
- (2) QCOS 2300-13, "HPCI System Manual Initiation Test," on September 7, 2021
- (3) Bus 14-1 under voltage surveillance testing on September 13, 2021

71114.04 - Emergency Action Level and Emergency Plan Changes

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

- (1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes:
 - Eval No. 20-76 Emergency Action Levels for Quad Cities Station, EP-AA-1006, Addendum 3

This evaluation does not constitute NRC approval.

RADIATION SAFETY

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) Unit 1 main steam safety relief valve activities
- (2) Unit 1 reactor disassembly/reassembly activities
- (3) Unit 2 main steam safety relief valve activities
- (4) Unit 2 Q2R25 feedwater heater repairs

Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (4 Samples)

The inspectors evaluated dose estimates and exposure tracking including as low as reasonably achievable planning documents and radiological outcome evaluations.

- (1) Unit 1 main steam safety relief valve activities
- (2) Unit 1 reactor disassembly/reassembly activities
- (3) Unit 2 main steam safety relief valve activities
- (4) Unit 2 Q2R25 feedwater heater repairs

71124.03 - In-Plant Airborne Radioactivity Control and Mitigation

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:

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

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

MS06: Emergency AC Power Systems (IP Section 02.05) (2 Samples)

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

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (2 Samples)

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

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

(1) (October 1, 2020 through June 30, 2021)

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual
Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample
(IP Section 02.16) (1 Sample)

(1) (October 1, 2020 through June 30, 2021)

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

(1) The inspectors reviewed the licensee's corrective action program for potential adverse trends in ventilation equipment issues that might be indicative of a more significant safety issue.

INSPECTION RESULTS

| Degraded Unit 2 Emergency Diesel Generator Fire Door | | | |
|---|---|-----------------------|----------------|
| Cornerstone | Significance | Cross-Cutting Aspect | Report Section |
| Mitigating Systems | Green NCV 05000254,05000265/2021003-01 Open | [P.2] - Evaluation | 71111.05 |
| The inspectors identified a finding of very low safety significance (Green) with an associated non-cited violation (NCV) of Technical Specification (TS) 5.4.1 for the failure to establish compensatory fire watches, in accordance with QCAP 1500-01, "Administrative Requirements for Fire Protection," for a degraded condition on the Unit 2 EDG room fire door. | | | |
| <u>Description:</u> On August 3, 2021, the inspectors observed the licensee performing a post-maintenance test of the starting air compressor on the Unit 2 EDG, which included performing a monthly EDG surveillance run. During the surveillance, the Unit 2 EDG door (fire door 120) appeared to move with significant sway due to the difference in air pressure between the room and the adjacent corridor. Upon further inspection, inspectors noticed that the latch at the bottom of the stationary door was broken and unable to hold the door shut as designed. The inspectors informed the equipment operator in the room and the issue was entered into the corrective action program. After a review by the on-shift crew, the licensee deemed the degraded latch on the door to be a trivial deficiency and the door was determined to be functional. No additional actions were taken by the licensee to address the degraded condition. The inspectors reviewed the issue report for the degraded fire door as well as the site's administrative requirements for the fire protection program. Licensee procedure QCAP 1500-01, "Administrative Requirements for Fire Protection," Revision 44, Section D.7, states that a fire barrier protecting safety-related areas shall be intact when the unit is in Mode 1, 2, and 3. If a door is equipped with flush bolts/surface bolts, then the door is considered inoperable when the top or bottom flush bolts/surface bolts do not engage. The inspectors noted that the degraded bottom bolt on fire door 120 prevented the engagement | | | |

required by procedure.

Additionally, QCAP 1500-01 states, in part, that if a fire barrier is inoperable, compensatory requirements shall be followed. These requirements include initiating a plant barrier impairment, returning the barrier to operable status within 14 days, and establishing an hourly fire watch within 1 hour of declaring the barrier inoperable. On August 4, 2021, inspectors reviewed licensee logs and noted that no plant barrier impairment was generated, and no hourly fire watch was being performed on the inoperable fire door as required. The inspectors brought up their concerns to the on-shift operations personnel. After further review, the crew determined that the door was not operable and initiated the required programmatic actions.

Corrective Actions: Licensee corrective actions included immediately establishing a fire watch, replacing the broken bottom bolt on the fire door, and performing an extent of condition on the remaining fire doors at the site.

Corrective Action References:

Action Request 4438662, "NRC ID: Broken Locking Pin on Bottom of Door to U2 EDG"

Action Request 4438936, "SSMP Door Surface Bolt Latch Fire Door 1005"

Action Request 4438965, "Unit 1 to Unit 2 HPCI Door Surface Latch (Fire Door 192)"

Action Request 4439282, "NRC ID: Update to IR [incident report] 4438662 (fire door impact)"

Action Request 4439673, "Fire Door 103 Lower Surface Bolt Connection Is Degraded "

Performance Assessment:

Performance Deficiency: The inspectors determined that the licensee's failure to perform hourly fire watch tours at the Unit 2 EDG fire door was contrary to Revision 44 of procedure QCAP 1500-01 and was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with fire door 120 inoperable, the failure to perform compensatory fire watch tours did not ensure that a fire in the Unit 2 EDG room would not spread to redundant or alternative safe shutdown equipment in an adjacent zone, adversely impacting the ability to achieve or maintain safe shutdown.

Significance: The inspectors assessed the significance of the finding using Appendix F, "Fire Protection and Post - Fire Safe Shutdown SDP." The Inspectors assessed the significance of the finding using Inspection Manual Chapter (IMC) 0609, Appendix F, Attachment 1, "Fire Protection Significance Determination Process Worksheet," dated May 2, 2018. Per step 1.3, the inspectors assigned the inoperable door a high degradation rating in accordance with IMC 0609, Appendix F, Attachment 2. In accordance with Step 1.4.1, "Fire Prevention and Administrative Controls," the inspectors answered "Yes" for question 1.4.1-A and "Yes" to question 1.4.1-B. Therefore, the finding screened to very low safety significance (i.e., Green).

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, the licensee failed to recognize that the degraded bottom

latch on fire door 120 was a condition that rendered the door inoperable because the appropriate programmatic documents were not referenced when dispositioning the degraded condition.

Enforcement:

Violation: Quad Cities Technical Specification 5.4.1 states that written procedures shall be established, implemented, and maintained covering the following activities: Fire Protection Program implementation. The licensee's fire protection program is implemented in accordance with QCAP 1500-01, "Administrative Requirements for Fire Protection," Revision 44.

Step D.7.a.(1) of QCAP 1500-1 states that if a door is equipped with flush bolts/surface bolts, then ensure bolts are engaged properly both top and bottom. Doors are inoperable when top or bottom flush bolts/surface bolts do not engage. QCAP 1500-01, Attachment I, "EFP Fire Doors," lists the Unit 2 EDG fire door as a door with flush bolts/surface bolts.

Per QCAP 1500-01, D.7.b.(2), if a barrier or penetration is found inoperable, then compensatory requirements shall be followed per step D.7.c, "Compensatory Requirements," which states that the following actions are required: (1) initiate a plant barrier impairment, (2) barrier must be returned to operable status within 14 days, and (3) establish a once per hour fire watch within 1 hour of declaring barrier inoperable if there is an operable area fire detection system on one side of the barrier.

Contrary to the above, from August 3, 2021, to August 4, 2021, the licensee failed to implement written procedures covering fire protection program implementation. Specifically, contrary to QCAP 1500-1, the initial issue report (Action Request 4438662) stated that the bottom locking bolt on the Unit 2 EDG fire door was a "trivial deficiency" and that "the door is functional as a fire door." As a result, a plant barrier impairment was not initiated, and multiple hourly fire watch tours were missed per the requirements of QCAP 1500-1.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Observation: Trend Review of Ventilation Fan Issues

71152

Inspectors reviewed the following corrective action documents to identify any adverse trends as evidence by acceptance of long-standing non-conforming or degraded conditions in the site's ventilation systems:

- Action Request 4383979, "FME[foreign material exclusion]: 2B RB [reactor building] Supply Fan Breaker Bus 28 Cub 3b Failure"
- Action Request 4424873, "1/2B Radwaste Exhaust Fan Auto Trip Following Re-Start"
- Action Request 4423477, "2A Reactor Building Exhaust Fan Tripped on Start"
- Action Request 4420973, "2C TB [turbine building] Exhaust Fan Did Not Trip When Taken to Trip"
- Action Request 4411809, "1C RB Exhaust Fan Auto Trip"
- Action Request 4401486, "2B RB Supply Discharge Damper Failed Open"

No findings or violations were identified in this sample.

EXIT MEETINGS AND DEBRIEFS

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

- On October 12, 2021, the inspectors presented the integrated inspection results to Mr. B. Wake, Acting Site Vice President, and other members of the licensee staff.
- On September 2, 2021, the inspectors presented the radiation protection inspection results to Mr. B. Wake, Plant Manager, and other members of the licensee staff.
- On October 1, 2021, the inspectors presented the EPlan and EAL Change inspection results to Mr. D. Moore, Senior Manager, Emergency Preparedness, and other members of the licensee staff.

DOCUMENTS REVIEWED

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|---|----------------|---|--|
| 71111.01 | Corrective Action Documents Resulting from Inspection | AR 4441795 | NRC ID'd Unit 2 Trackway Extension LIP Barrier | 08/20/2021 |
| | | Procedures | QCOA 0010-22 | Local Intense Precipitation Response Procedure |
| | | | WC-AA-107 | Seasonal Readiness |
| 71111.04 | Procedures | QCOP 4700-01 | Instrument Air System Startup | 23 |
| | | | QOM 2-4700-01 | Unit 2 Instrument Air Valve Checklist |
| 71111.05 | Fire Plans | FZ 4.0 | SB 595'-0" Elev. Computer Room in Auxiliary Electric Room | March 2012 |
| | | FZ 5.0 | Fire Zone: 5.0, Safe Shutdown Pump Room, Fire Area: TB-II, General Elevation: 595'-0" | October 2019 |
| | | FZ 5.0 | Unit 2 TB 595'-0" Elev. Safe Shutdown Pump Room | March 2018 |
| | | FZ 6.3 | SB 595'-0" Elev. Auxiliary Electric Room | October 2013 |
| | | FZ 8.2.4 | Fire Zone: 8.2.4, Unit 1 Cable Tunnel, Fire Area: CT-1, General Elevation: 588'-0" | October 2021 |
| | | FZ 8.2.4 | Unit 1 TB 580'-0" Elev. Cable Tunnel | March 2012 |
| | | FZ 8.2.5 | Fire Zone: 8.2.5, Unit 2 Cable Tunnel | October 2021 |
| | | FZ 8.2.5 | Unit 1/2 TB 580'-0" Elev. U-2 Cable Tunnel | October 2013 |
| 71111.06 | Procedures | QCAP 0250-06 | Control of In-Plant Flood Barriers and Watertight "Submarine" Doors | 18 |
| | | | QCTP 0130-11 | Internal Flood Protection Program |
| | | Work Orders | WO 4878780 | RBFDS Ball Valve Leakage Testing |
| 71111.12 | Miscellaneous | | 10 CFR 50.65(a)(3) Periodic Evaluation | 07/31/2020 |
| | | | QC-MRULE-002 | Maintenance Rule Performance Criteria Validation - QC118A |
| | | Procedures | NO-AA-300 | Inspection Planning and Execution of Quality Inspection Activities |
| | | NO-AA-300-1001 | Nuclear Oversight Independent Inspection Plan | 14 |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|---|---------------|--|--|
| 71111.13 | Corrective Action Documents | AR 4428172 | RCIC Isolated During Performance of MA-QC-IM-1-13201 | 06/08/2021 |
| | | AR 4432710 | Hydraulic Leak on 2A FRV | 07/01/2021 |
| | Corrective Action Documents Resulting from Inspection | AR 4439861 | NRC Question Regarding RHR Availability and Room Cooler OOS | 08/10/2021 |
| | | Procedures | QCOS 0300-14 | Control Rod Drive Inoperable Outage Report |
| | QCOS 1300-05 | | RCIC Pump Operability Test | 59 |
| | QOA 5750-14 | | Loss of ECCS Room Coolers | 27 |
| | QOP 5750-17 | | ECCS Room Coolers | 19 |
| 71111.15 | Corrective Action Documents | AR 2599169 | 1A RHR Room Cooler Vertical Support Degraded | 12/11/2015 |
| | | AR 4438019 | EO ID Unidentified Leak in U2 RWCU HX Room | 07/30/2021 |
| | | AR 4438821 | U2 RWCU Regen HX Leak | 08/03/2021 |
| | | AR 4441449 | LS 1-2351-A Identified as Cause for 125 Vdc Ground | 08/18/2021 |
| | Corrective Action Documents Resulting from Inspection | AR 4438965 | Unit 1 to Unit 2 HPCI Door Surface Latch (Fire Door 192) | 08/04/2021 |
| | | AR 4441227 | NRC ID: Walk Down Concerns | 08/17/2021 |
| | Drawings | 4E-2528 | Schematic Diagram HPCI System Valves and Turbine Auxiliaries, Sheet 1 | 10/05/2004 |
| | | M-88, Sheet 1 | Diagram of Reactor Water Clean-Up Piping | 11/15/1999 |
| | Engineering Changes | EC 634714 | Jumper CCST Level Switches to Allow Draining of CCST B Tank to Torus | 08/04/2021 |
| | | ECR 421688 | 1A RHR Room Cooler Seismic Calculation to Support the Southeastern Vertical Support of the Cooler Being Degraded | |
| | Miscellaneous | SESR 4-2621 | Fire Door - U1/U2 HPCI Rooms | 12/08/1995 |
| | | SESR 4-2623 | Fire Door - U1/U2 HPCI Rooms | 02/08/1995 |
| | Procedures | QCOP 6900-19 | Documenting 125/250 Vdc Grounds | 15 |
| 71111.19 | Procedures | QCOP 6600-05 | Shared Unit Diesel Generator Startup | 43 |
| | | QCOS 1000-04 | RHR Service Water Pump Operability Test | 65 |
| | | QCOS 1000-27 | RHR Pump Comprehensive/Performance Test | 22 |
| | | QCOS 1000-28 | RHR Service Water Pump Comprehensive/Performance Test | 27a |
| | | QCOS 6600-42 | Unit 2 Emergency Diesel Generator Load Test | 55 |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|-------------------------------|----------------|--|---------------------------|
| | | QCOS 6600-46 | Unit 1/2 Diesel Generator Timed Start Test | 26 |
| | | QCOS 9910-01 | Security Diesel Generator Monthly Test Run | 60 |
| 71111.22 | Procedures | QCOS 1600-06 | ECCS and Primary Containment Isolation Trip Instruments Outage Report | 23 |
| | | QCOS 2300-13 | HPCI System Manual Initiation Test | 59 |
| | | QCOS 2900-01 | Safe Shutdown Makeup Pump, Pump Flow Rate Test | 41 |
| | | QCOS 2900-10 | Safe Shutdown Makeup Pump Local Panel Flow Test | 6 |
| | | QCOS 6500-09 | Functional Test of Unit 1 Second Level Undervoltage | 35 |
| | | QCOS 6600-11 | Unit 1 Diesel Generator Outage Report | 28 |
| | | QCOS 6600-41 | Unit 1 Emergency Diesel Generator Load Test | 60 |
| | | Work Orders | WO 5158553 | SSMP Flow Rate Test (IST) |
| 71114.04 | Miscellaneous | Eval No. 20-76 | Emergency Action Levels for Quad Cities Station, EP-AA-1006, Addendum 3 | 10/23/2020 |
| 71124.02 | ALARA Plans | QC-01-21-00510 | ERV/SRV/Target Rock Work Activities | 03/04/2021 |
| | | QC-01-21-00901 | Reactor Disassembly/Reassembly Activities | 02/02/2021 |
| | | QC-02-20-00422 | Q2R25 Feedwater Heater Repairs | 03/16/2020 |
| | | QC002-20-00510 | DW SRV/ERV/TR Remove/Replace (Q2R25) | 02/13/2020 |
| | Miscellaneous | | Q2R25 Refueling Outage Report Quad Cities Generating Station Radiation Protection | 07/09/2020 |
| | | | Q2126 Refueling Outage Report Quad Cities Generating Station Radiation Protection | 0 |
| | Radiation Work Permits (RWPs) | QC-01-21-00510 | DW Main Steam Safety Relief Valve Activities | 00 |
| | | QC-01-21-00901 | Reactor Disassembly/Reassembly Activities | 1 |
| | | QC-02-20-00422 | Q2R25 Feedwater Heater Repairs | 01 |
| | | QC-02-20-00510 | DW Main Steam Safety Relief Valve Activities | 00 |
| 71124.03 | Procedures | RP-AA-825-101 | Monthly Inspection and Maintenance of MSA Firehawk Mask Mounted Regulator SCBAs | 2 |
| 71151 | Miscellaneous | CY-QC-120-720 | Attachment 2; Actual Dose Data; Unit 1 and Unit 2 | October 2020 - June 2021 |
| | | LS-AA-2090 | Monthly Data Elements for NRC Indicator - Reactor Coolant System (RCS) Specific Activity | October 2020 - June 2021 |

| Inspection Procedure | Type | Designation | Description or Title | Revision or Date |
|----------------------|------|-------------|---|--------------------------|
| | | SP-AA-3000 | Attachment A; Site Performance Indicator Validation Sheet | October 2020 - June 2021 |