



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

August 8, 2022

EA-22-055

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

**SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 – INTEGRATED
INSPECTION REPORT 05000237/2022002; 05000249/2022002 AND
07200037/2022001 AND EXERCISE OF ENFORCEMENT DISCRETION**

Dear Mr. Rhoades:

On June 30, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Dresden Nuclear Power Station, Units 2 and 3. On July 26, 2022, the NRC inspectors discussed the results of this inspection with Mr. Pat Boyle, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

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

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

Sincerely,



Signed by Ruiz, Robert
on 08/08/22

Robert Ruiz, Chief
Branch 1
Division of Reactor Projects

Docket Nos. 05000237, 05000249 and
07200037

License Nos. DPR-19 and DPR-25

Enclosure:
As stated

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Letter to David Rhoades from Robert Ruiz dated August 8, 2022.

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 – INTEGRATED INSPECTION REPORT 05000237/2022002; 05000249/2022002 AND 07200037/2022001 AND EXERCISE OF ENFORCEMENT DISCRETION

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

Docket Numbers: 05000237 and 05000249

License Numbers: DPR-19 and DPR-25

Report Numbers: 05000237/2022002; 05000249/2022002 and 07200037/2022001

Enterprise Identifier: I-2022-002-0048

Licensee: Constellation Energy Generation, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Inspection Dates: April 01, 2022 to July 23, 2022

Inspectors: A. Demeter, Resident Inspector
G. Edwards, Health Physicist
R. Edwards, Senior Reactor Inspector
M. Learn, Transportation and Storage Inspector
A. Nguyen, Senior Resident Inspector
M. Porfirio, Illinois Emergency Management Agency
C. St. Peters, Resident Inspector

Approved By: Robert Ruiz, 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 Dresden Nuclear Power Station, Units 2 and 3, 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

Type	Issue Number	Title	Report Section	Status
EDG	EA-22-055	Tornado Hazards Protection at Independent Spent Fuel Storage Installations	60855	Closed
LER	05000249/2021-001-01	LER 2021-001-01 for Dresden Nuclear Power Station, Unit 3, Reactor Scram due to Main Power Transformer Failure	71153	Closed

PLANT STATUS

Unit 2 began the inspection period at rated thermal power. On June 11, 2022, the unit was downpowered to approximately 62 percent for a scheduled control rod pattern adjustment, scram time testing, turbine valve testing, and repairs to the 2B feedwater pump and regulating valve. The unit was returned to rated thermal power on June 12, 2022, and remained at or near rated thermal power for the remainder of the inspection period.

Unit 3 began the inspection period at rated thermal power. On April 9, 2022, the unit was downpowered to approximately 35 percent to investigate elevated drywell leakage values. The unit was shut down on April 10, 2022, for forced outage, D3F55 to repair the cause of the elevated drywell leakage, a packing leak on the 1B main steam isolation valve. Following repairs, the unit was returned to rated thermal power on April 13, 2022. On June 4, 2022, the unit was downpowered to approximately 75 percent for a scheduled control rod pattern adjustment, scram time testing, and turbine bypass valve testing. The unit was returned to rated thermal power on June 5, 2022 and 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

71111.01 - Adverse Weather Protection

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

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of extreme hot weather for the following systems:

Service water, reactor building closed cooling water, turbine building closed cooling water, containment cooling service water, the emergency diesel generators and auxiliaries, and station batteries on May 10-11, 2022.

The inspectors also evaluated the plant's offsite AC power systems and onsite alternate AC power systems, including the switchyard and transformers to ensure prior issues had been addressed before the onset of summer weather conditions. The inspectors verified that weather-related equipment deficiencies on susceptible plant systems identified during the previous year had been corrected prior to the onset of summer weather.

71111.04 - Equipment Alignment

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

- (1) Unit 2 core spray system on May 6-9, 2022
- (2) Unit 2 and Unit 3 service water and associated cooling water systems on May 9-10, 2022
- (3) Unit 2 and Unit 3 turbine building and reactor building closed cooling water systems on May 10-11, 2022

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

- (1) The inspectors evaluated system configurations during a complete walkdown of the Unit 2 isolation condenser system on April 25-27, 2022.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (3 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 6.1, Unit 3 250V Battery Charger Room, elev. 538' and Fire Zone 7.0.B, Unit 3 Battery Room, elev. 551' on June 1, 2022
- (2) Fire Zone 1.1.1.3, Unit 3 General Area, elev. 545' on June 1, 2022
- (3) Fire Zone 8.2.5.C, Unit 2/3 EHC Reservoir Area, elev. 517', on June 6, 2022

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) Unit 2 and Unit 3 torus basement and ECCS corner rooms

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 administered between April 4, 2022, and May 16, 2022.

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

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

- (1) The inspectors observed and evaluated licensed operator performance in the control room during the Unit 3 emergent shutdown and startup activities for forced outage, D3F55, on April 10-12, 2022

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

- (1) The inspectors observed and evaluated the performance of a complex casualty graded scenario by a crew of licensed plant operators in the facility's simulator on May 4, 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) Closed cooling water systems
- (2) AC/DC Distribution System

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) Unit 3 emergent shutdown risk for D3F55 concurrent with 'A' CST inoperable to both units for repairs to an ECCS suction valve on April 10-12, 2022
- (2) Dry cask storage evolutions during the week of April 25, 2022
- (3) Elevated plant risk during scheduled Unit 3 EDG maintenance window on April 25-27, 2022
- (4) Elevated plant and fire risk during scheduled 3A core spray maintenance window on May 9-10, 2022
- (5) Elevated plant and fire risk on Unit 2 and Unit 3 during work week May 16-20, 2022, for ECCS divisional work windows, common unit SBTG work window, and Dry Fuel Storage elevated risk
- (6) Unit 3 emergent work to troubleshoot and repair issues with the plant process computer and rod block monitor, June 4-6, 2022

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) Historical operability of the isolation condenser batteries
- (2) 2A LPCI Motor Bearing Oil Sample had High Moisture Content
- (3) Unit 3 LPCI Relay, 3-1530-127, Contacts had High Resistance
- (4) Unit 3 Diesel Generator Resistor, R19, Degradation
- (5) Impact on Unit 3 Batteries due to degraded ventilation system and warm weather

71111.18 - Plant Modifications

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

The inspectors evaluated the following temporary or permanent modifications:

- (1) (Partial)
Unit 2 and Unit 3 High Pressure Core Injection Signal Converter Modification

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (3 Samples)

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

- (1) Intermediate range monitor (IRM) functional testing per DOS 0700-02, 0700-04, and 0700-05, after troubleshooting and calibration of Unit 3 IRM 14 on April 11, 2022
- (2) DOS 0250-02, full closure timing and exercising of MSIVs and DOS 0250-03, MSIV fail safe closure test, after repairs to packing on the Unit 3 1B MSIV on April 11, 2022
- (3) DOS 1400-05, core spray system pump operability and quarterly IST test with torus available, after the 3A core spray maintenance window on May 10, 2022

71111.20 - Refueling and Other Outage Activities

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

- (1) The inspectors evaluated forced outage (D3F55) activities on Unit 3 for increased drywell leakage due to a 1B MSIV packing leak from April 10-13, 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) (2 Samples)

- (1) Unit 2 diesel generator endurance run and full load reject on April 19 and 20, 2022
- (2) Unit 2 and Unit 3 38.5 percent rated core thermal power scram bypass pressure switches calibration and functional checks on date April 19, 2022

71114.06 - Drill Evaluation

Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

- (1) Dresden 2Q2022 focus area drill on June 28, 2022

RADIATION SAFETY

71124.05 - Radiation Monitoring Instrumentation

Walkdowns and Observations (IP Section 03.01) (8 Samples)

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

- (1) Area Radiation Monitors used on the refuel floor
- (2) Frisker used at the radiologically controlled area exit
- (3) Continuous Air Monitor used to monitor the Unit 2 drywell
- (4) Small Article Monitor used at the radiologically controlled area exit
- (5) Continuous Air Monitor used on the refuel floor
- (6) Continuous Air Monitor used to monitor the Unit 3 drywell
- (7) Portable Alpha/Beta smear counter used on the refuel floor
- (8) Frisker used in the radiological waste building

Calibration and Testing Program (IP Section 03.02) (13 Samples)

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

- (1) ThermoFisher Scientific SAM12, SN#12095
- (2) ThermoFisher Scientific SAM12, SN#152
- (3) ThermoFisher Scientific SAM12, SN#151
- (4) ThermoFisher Scientific PM12, SN#011
- (5) ThermoFisher Scientific PM12, SN#121
- (6) ThermoFisher Scientific PM12, SN#011
- (7) Ludlum Model 177, SN#0024972
- (8) Ludlum Model 3030P, SN#001631
- (9) Ludlum Model 177, SN#0017414
- (10) Mirion Argos 5, SN#1503-039
- (11) Mirion Argos 5, SN#1012-305
- (12) Mirion Argos 5, SN#1206-085
- (13) Mirion DMC3000, SN#950999

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

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

- (1) Unit 2/3 Particulate, Iodine, and Noble Gas (SPING-3/4) chimney effluent monitor
- (2) Unit 3 Service Water effluent sample radiation monitor

71124.07 - Radiological Environmental Monitoring Program

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

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

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

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

- (1) Unit 2 (April 1, 2021 through March 31, 2022)
- (2) Unit 3 (April 1, 2021 through March 31, 2022)

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

- (1) Unit 2 (April 1, 2021 through March 31, 2022)
- (2) Unit 3 (April 1, 2021 through March 31, 2022)

BI02: RCS Leak Rate Sample (IP Section 02.11) (2 Samples)

- (1) Unit 2 (April 1, 2021 through March 31, 2022)
- (2) Unit 3 (April 1, 2021 through March 31, 2022)

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

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

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

- (1) LER2021-001-01, Reactor Scram due to Main Power Transformer Failure (ADAMS Accession No. ML22165A204). The inspectors reviewed the updated LER submittal. The previous LER submittal was reviewed in Inspection Report 05000237/2021004 and 05000249/2021004.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855 - Operation of an ISFSI

Operation of an ISFSI (1 Sample)

- (1) The inspectors assessed the licensee’s Independent Spent Fuel Storage Installation (ISFSI) cask loading activities from May 9 through May 26, 2022. Specifically, the inspectors observed the following activities during the loading of multi-purpose canister (MPC) No. 787:
 - heavy lift of the loaded transfer cask (HI-TRAC) from the spent fuel pool to the cask processing area
 - canister processing including blowdown and forced helium dehydration
 - stack-up and download of the MPC from the HI-TRAC into the storage cask (HI-STORM)
 - radiological field surveys

The inspectors performed walkdowns of the ISFSI pad, including walkdowns of the ISFSI haul path.

The inspectors evaluated the following:

- spent fuel selected for loading into dry cask storage during this loading campaign
- selected corrective action program documents
- selected 72.48 screenings and evaluations

INSPECTION RESULTS

Enforcement Discretion	Enforcement Action EA-22-055: Tornado Hazards Protection at Independent Spent Fuel Storage Installations	60855
<u>Description:</u> Upon issuance of U.S. NRC Enforcement Guidance Memorandum (EGM) 22-001 (ML22087A496), dated April 15, 2022, the licensee performed an assessment of all outdoor dry cask storage activities that are not explicitly analyzed for tornado hazards in the cask licensing basis. One configuration was identified by the licensee when a loaded Holtec HI-STORM 100 storage overpack is brought out of the reactor building without a lid installed. This configuration is not explicitly analyzed in the HI-STORM 100 FSAR. Title 10 of the Code of Federal Regulations (CFR) 72.212 (b)(6), states, in part, that “the general licensee must... review the Safety Analysis Report referenced in the [Certificate of Compliance] CoC or amended CoC and the related NRC Safety Evaluation Report, prior to use of the general		

license, to determine whether or not the reactor site parameters, including analyses of earthquake intensity and tornado missiles, are enveloped by the cask design bases considered in these reports. The results of this review must be documented in the evaluation made in paragraph (b)(5) of this section.” Tornado hazards are evaluated in the Holtec HI-STORM Final Safety Analysis Report (FSAR) section 3.4.8, “Tornado Wind and Missile Impact,” and section 11.2.6.2, “Tornado Analysis.” These sections of the FSAR do not include an analysis for tornado hazards with the storage overpack lid removed. Similarly, the licensee did not have an evaluation demonstrating the reactor site parameters enveloped the cask design basis for tornado missiles specifically for the configuration where a loaded storage overpack was outdoors with the lid off.

Corrective Actions: The licensee entered the issue into its corrective action program to address the actions specified in EGM 22-001. Specifically, the licensee established additional measures that:

- (1) mitigate tornado hazards, through procedures, during periods of ISFSI handling operations which include:
 - (a) precluding outdoor dry cask storage activities during periods of adverse weather;
 - (b) establishing meteorological criteria and designating staff to monitor weather during ISFSI handling operations;
 - (c) describing actions to take in the event of severe weather necessary to place the cask in an analyzed condition; and
 - (d) minimizing the duration of ISFSI handling operations during which ISFSI important to safety structures, systems, and components are in an unanalyzed condition.
- (2) document that required weather checks are complete prior to the start of ISFSI handling operations
- (3) document in the CAP a request for the CoC holder to request an amendment within six months of the date of the EGM

Because the licensee implemented compensatory measures and plans to take necessary actions to restore compliance in accordance with the EGM, the NRC is allowing continued ISFSI handling operations.

Corrective Action References: IR 04494731; NRC Issuance of EGM 22-001 for ISFSI Tornado Hazard; 04/21/2022

Enforcement:

Significance/Severity: The inspectors assessed the issue as being more than minor significance but not more than Severity Level IV. Consistent with the guidance in EGM 22-001 discussed below, the NRC is exercising enforcement discretion.

Violation: Title 10 of the Code of Federal Regulations (CFR) 72.122 (b)(6), states, in part, that “the general licensee must... review the Safety Analysis Report referenced in the CoC or amended CoC and the related NRC Safety Evaluation Report, prior to use of the general license, to determine whether or not the reactor site parameters, including analyses of earthquake intensity and tornado missiles, are enveloped by the cask design bases considered in these reports. The results of this review must be documented in the evaluation made in paragraph (b)(5) of this section.”

Contrary to the above, on April 15, 2022, the licensee did not have a documented evaluation determining whether the reactor site parameters, including analyses of tornado missiles, were enveloped by the cask design bases considered in the Safety Analysis Report. Specifically, the licensee failed to have an analysis for tornado hazards when the loaded storage overpack is outside the reactor building without a lid installed.

Basis for Discretion: Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 22-001, "Enforcement Discretion for Noncompliance of Tornado Hazard Protection requirements at Independent Spent Fuel Storage Installations," and because the licensee was implementing compensatory measures and has taken or plans to take the necessary actions to restore compliance, the NRC is exercising enforcement discretion by not issuing an enforcement action for the violation and is allowing continued ISFSI handling operations.

Observation: Equipment Reliability Trend and Improvement Actions	71152S
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The inspectors performed a semiannual review of issues entered into the corrective action program (CAP) and a cognitive review of plant observations over the period of January 1, 2022, to June 30, 2022, to identify any potential trends that might indicate the existence of a more significant safety issue. The inspectors also reviewed the licensee's Equipment Reliability Excellence Plan to evaluate their corrective actions being taken to address gaps in this area.

In 2021, as a result of several impactful equipment deficiencies, the licensee and NRC identified a decline in their equipment reliability program. The licensee created the Excellence Plan to holistically review the equipment reliability program, identify gaps, and create corrective actions to address identified vulnerabilities. This Plan is a broad-scope, on-going effort that the inspectors reviewed to check-in on the licensee's progress in addressing equipment issues. To this point, the licensee has conducted several training and knowledge management activities for the engineering organization, as well as others throughout the site, to ensure all those involved in the process understood their critical roles in ensuring equipment deficiencies are properly identified, evaluated, and resolved to improve reliability. The licensee has also performed several benchmarking activities, within and external to the Constellation fleet, to identify best practices and improve their program for better results. Finally, the licensee has conducted a number of system reviews to identify specific vulnerabilities in the system and create targeted corrective actions to address those vulnerabilities. For example, a review of the Nuclear Instrumentation system created corrective actions to implement new maintenance strategies for replacement of undervessel cables and connectors for the instruments that repeatedly have caused inoperability/unreliability of these components.

The inspectors reviewed these system certifications, actions, and due dates. Currently, the actions appear appropriate; however, the inspectors emphasized that continued focus on executing aggressive schedules were needed to address some of the issues because of the age of the issue and/or the potential risk from allowing the issues to linger for an extended period of time. For example, the inspectors identified a Fire Protection (FP) system pipe that had a leak during a routine plant walkdown. This was one of several leaks on piping in this system that had revealed itself over the past year. The leak identified also impacted (dripped on) a Containment Cooling Service Water (CCSW) pipe and was creating a rust spot on that pipe. Both of these systems, FP and CCSW, have long-range plans to replace known degraded sections of piping due to the age and raw water conditions of the pipes. Based on

issues self-revealed over the past year, these long-range plans have been re-scheduled to first available opportunities (either on-line or next refueling outage) to ensure more timely resolution. This is just one of several examples over the past six months, where leaks have occurred on raw water system piping. Also, during this time frame, the licensee had to emergently address a service water piping leak associated with the main turbine lube oil cooler. This issue could have had a significant operational impact on the unit if it hadn't been identified in a timely manner.

In the first half of 2022, the plant had still encountered many equipment deficiencies that have resulted in emergent responses on behalf of the organization to resolve, some of these also included emergent system inoperabilities and unit downpowers. For example, in March during a downpower, Unit 2 conducted emergent repairs to the 2B Feedwater pump breaker. In April, Unit 3 emergently shut down to repair packing leakage from the 1B Main Steam Isolation Valve (MSIV). Both of these issues were similar to or the same as prior equipment deficiencies on those components. The inspectors emphasized that the licensee ensure they are thoroughly evaluating all new events, and their extent-of-conditions, for lessons-learned and any gaps that could be addressed in their Equipment Reliability Excellence Plan.

Overall, for the first half of the year's activities associated with the Equipment Reliability Excellence Plan, the inspectors determined that, generally, the system reviews the licensee conducted were comprehensive and took into account some long-standing equipment degradation issues and deficiencies that need to be addressed in a timely manner. Currently, the corrective actions have due dates that are commensurate with the safety significance/risk impact of the deficiencies. The inspectors did not identify any findings or violations associated with the activities in the Plan up to this point.

EXIT MEETINGS AND DEBRIEFS

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

- On July 26, 2022, the inspectors presented the integrated inspection results to Mr. P. Boyle, Site Vice President, and other members of the licensee staff.
- On May 6, 2022, the inspectors presented the radiation protection inspection results to Mr. C. Joseph, Plant Manager, and other members of the licensee staff.
- On May 26, 2022, the inspectors presented the Operation of an ISFSI inspection results to Mr. C. Joseph, Plant Manager, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
60855	ALARA Plans	DR-0-22-00204/5	2022 Dry Cask Activities	0	
	Corrective Action Documents	AR 04234314	East ISFSI Walkdown Quarterly Results	03/29/2019	
		AR 04234323	West ISFSI Walkdown Quarterly Results	03/29/2019	
		AR 04246946	2019 Dry Cask #2 WIP	05/07/2019	
		AR 04259220	2019 Dry Cask Post Job Review	06/25/2019	
		AR 04267696	West ISFSI 3Y Structural Inspection Finding	07/29/2019	
		AR 04267706	East ISFSI 3Y Structural Inspection Findings	07/29/2019	
		AR 04284952	West ISFSI Walkdown Quarterly Results	10/04/2019	
		AR 04303751	West ISFSI Walkdown Quarterly Results	12/13/2019	
		AR 04305177	West ISFSI Annual Walkdown Results	12/19/2019	
		AR 04305186	East ISFSI Annual Walkdown Results	12/19/2019	
		AR 04354188	2020 Dresden Dry Cask Storage Campaign Critique & LL	07/01/2020	
		AR 04358890	Corrosion on Top of Dry Casks	07/24/2020	
		AR 04360195	West ISFSI Quarterly Walkdown Results Vent Holes and Dents	07/31/2020	
		AR 04360197	West ISFSI Quarterly Walkdown Results Surface Rust on Casks	07/31/2020	
		AR 04376788	NOS ID: West ISFSI 72.212 has Incorrect 72.48 Revisions	10/15/2020	
	AR 04489544	2022 14M ISFSI Cask Surveillance Inspection Results	04/01/2022		
	Miscellaneous			DCS Approval PCI Qualification Records	03/30/2022
				DCS Approval LTS Qualification Records	03/31/2022
		72.212 Evaluation Report		East ISFSI 72.212 Evaluation Report	9
		72.212 Evaluation Report		West ISFSI 10 CFR 72.212 Evaluation Report	14
		DRE22-0001		Dresden Unit 3 Fuel Selection Packages and Alternate Assembly List for 2022 Campaign	02/04/2022
	Procedures	DFP 0800-72		HI-STORM Processing	29
		DOA 0800-01		Spent Fuel Cask Abnormal Conditions	20
		GQP 9.2		High Temperature Liquid Penetrant Examination and Acceptance Standards for Welds, Base Materials, and	1

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
			Cladding		
		GQP 9.6	Visual Examination of Welds	1	
		NF-AA-622	Fuel Selection and Documentation for Dry Cask Loading	6	
		OU-MW-671-200	FHD for BWRs	10	
		PI-CNSTR-OP-EXE-H-01	Closure Welding of Holtec Multi-Purpose Canisters at Exelon Facilities	22	
	Self-Assessments	NOSA-DRE-20-10	Independent Spent Fuel Storage Installation Audit Report	10/21/2020	
	Work Orders	05016349	D2/3 1Y COM Reactor Building Overhead Crane Inspection	02/11/2021	
		05044995	D2/3 1Y COM ISFSI Test of HI-TRAC Trunnions	05/27/2021	
		05046564	D2/3 1Y COM ISFSI Test of HI-STORM Lift Bracket	06/01/2021	
		05049684	D2/3 AN COM ISFSI Test of U2/3 RB 125 Ton Lift Yoke	06/09/2021	
		05127655	D2/3 1Y COM OSHA INSP Crane - RX BLDG Overhead	04/05/2022	
		05127675	D2/3 1Y COM OSHA Reactor BLDG Overhead Crane Inspection	04/07/2022	
			05137506	D2/3 12M COM ISFSI Test of MPC Lift Cleats	05/28/2021
71111.01	Corrective Action Documents	4498962	Unit 3 Battery Room Air Conditioning Unit Compressor Unreliable	05/11/2022	
		4499142	Trend IR: HVAC Performance at the Onset of Warm Weather	05/11/2022	
		4500938	Unexpected Alarm, 902-7, H-3, Turbine Vacuum Lo	05/20/2022	
		4501989	Contingency TCCP for Loss of All Isophase Bus Duct Cooling	05/25/2022	
		4506261	Thermography Anomaly Found in Unit 3 MPT	06/18/2022	
		4506651	MPT 3 Winding #2 Temperature Setpoint Discrepancy	06/21/2022	
		AR 04442299	Dresden 2022 Summer Readiness Actions Per WC-AA-107	08/24/2021	
	Miscellaneous		Site Certification Letter for Summer Readiness	05/06/2022	
	Procedures	DOP 4450-08	Dresden Cooling Lake Operation	35	
		WC-AA-107	Seasonal Readiness	24	
		WC-DR-104-1001	Dresden 345kV Switchyard Configuration Risk Assessment	08	
	71111.04	Procedures	DOP 1300-M1/E1	Unit 2 Isolation Condenser System Checklist	22
			DOP 1400-E1	Unit 2 Core Spray System Electrical Checklist	4
DOP 1400-M1			Unit 2 Core Spray System	24	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		DOP 1500-E1	Unit 2 LPCI and CCSW Electrical Checklist	15
		DOP 1500-E1	Unit 3 LPCI and CCSW Electrical Checklist	14
		DOP 1500-M1	Unit 2 LPCI and Containment Cooling Valve Checklist	50
		DOP 1500-M1	Unit 3 LPCI and Containment Cooling Valve Checklist	39
		DOP 3700-M2/E2	Unit 2 RBCCW System Checklist	18
		DOP 3700-M2/E2	Unit 3 RBCCW System Checklist	20
		DOP 3800-M1	Unit 3 Turbine Building Closed Cooling Water System Checklist	14
		DOP 3800-M1	Unit 2 Turbine Building Closed Cooling Water System Checklist	16
		DOP 3900-E1	Unit 2(3) Service Water and Screen Wash System Electrical Checklist	14
		DOP 3900-M1	Unit 2/3 Service Water and Screen Wash Valve Checklist	63
		DOP 6600-M1	Unit 2 Standby Diesel Generator Checklist	30
		DOP 6600-M1	Unit 3 Standby Diesel Generator Checklist	29
71111.05	Fire Plans	124 U3RB-26	Fire Zone 1.1.1.3, Unit 3 General Area, Elev. 545'	05
		168 U3TB-79	Fire Zone 7.0.B, Unit 3 Battery Room, Elev. 551'	05
		169 U3TB-80	Fire Zone 6.1, Unit 3 250V Battery Charger Room, Elev. 538'	06
		175 U2/3TB-92	Fire Zone 8.2.5.C, Unit 2/3 EHC Reservoir Area, Elev. 517'	04
71111.06	Corrective Action Documents	4496905	Groundwater In-Leakage into Unit 2 Reactor Building from HRSS Pipe Tunnel	05/01/2022
		4497744	Rainwater into Unit 3 Torus Basement from HRSS Pipe Tunnel	05/03/2022
	Engineering Evaluations	DR-PSA-012	Internal Flood Evaluation Summary and Notebook	04
71111.11Q	Corrective Action Documents	4500616	Follow-Up to IR 4496004 (DEP Failure in LORT Requal)	05/18/2022
	Procedures	DGP 01-01	Unit Startup	202
		DGP 02-01	Unit Shutdown	175
71111.12	Corrective Action Documents	4498962	Unit 3 Battery Room Air Conditioning Unit Compressor Unreliable	05/11/2022
		AR 04326378	TBCCW Pump - Lessons Learned	03/06/2020
		AR 04337578	Request WGE to Evaluate Trend in RBCCW TCV	04/22/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Performance	
		AR 04460820	D2R27: MOV 2-3703 Overtorque and Trace Anomalies	11/14/2021
		AR 04488199	IEMA ID - 3B TBCCW Pump Noise	03/29/2022
		AR 04492766	Engineering to Perform a SA for Raw Water Programs	04/13/2022
		AR 04493035	Generate WR to Inspect Actuator of MOV 2-3703 in D2R28	04/13/2022
	Engineering Changes	622098	Replace [Unit 3 Battery Room] HVAC Unit	01
	Engineering Evaluations	PMC-22-135043	Increase Frequency of PMRQ 789-01 to O1/1RFL (D3R27)	06/20/2022
	Miscellaneous		Unit 3 AC/DC System Health Report	06/30/2022
		Unit 3 Station Battery Maintenance Template	06/30/2022	
71111.13	Corrective Action Documents	4482832	Increasing Floor Drain Leakage in Unit 3 Drywell	03/06/2022
		4490878	Increasing Unit 3 Drywell Floor Drain Leakage	04/06/2022
		4491049	Unit 3 Drywell Iodine 131 Increasing	04/07/2022
		4491759	Unit 3 Drywell Beta Above NSO Appendix A Action Level	04/09/2022
		4491906	3B RBCCW TCV Packing Leak	04/10/2022
		4500354	Unexpected Main Control Room Alarm Unit 2 West Reactor Building Floor Drain Sump Level Hi-Hi	05/17/2022
		4502749	Unexpected Alarm: Core Thermal Power High	05/30/2022
		4503851	Core Thermal Power Plant Process Computer Inputs Froze	06/04/2022
	Corrective Action Documents Resulting from Inspection	4495502	NRC ID: Small Oil Leak by Unit 2 EDG Immersion Heater	04/25/2022
	Engineering Evaluations	Safety Function Determination 22-05-001	Division 2 Containment Cooling Service Water System	05/17/2022
	Miscellaneous		2022 Dry Cask Storage (DCS) Flow Chart	8
			Unit 3 Shutdown Safety Plan	00
	Procedures	DAN 923-4, B-2	Unit 2 West Reactor Building Floor Drain Sump Level Hi-Hi	05
		DEOP 0300-01	Secondary Containment Control	13
		DFP 0850-01	Slow or Rapid Water Level Loss in Fuel Pool/Reactor Cavity	17
		DFP 0850-02	New/Irradiated Fuel Damage	5

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		DFP 0850-03	High Radiation on Refuel Floor	7
		OP-AA-107-F-01	Risk Screening/Mitigation Plan	2
		OP-AA-108-117	Protected Equipment Lists (Various)	various
71111.15	Corrective Action Documents	4347579	Relay Contacts not Conducting	06/02/2020
		4495629	Resistor Degradation	04/25/2022
		4498962	Unit 3 Battery Room Air Conditioning Unit Compressor Unreliable	05/11/2022
		4499062	2A LPCI MUB Lube Oil Sample Returned with High Moisture	05/11/2022
		4500689	3-1530-127 Relay Contact 3/4 had High Resistance	05/19/2022
		IR 04481354	2/3B Iso Condenser Makeup Pump Failed to Start on First Try	02/28/2022
		IR 04481363	Engineering to Evaluate Iso Condenser Batteries	02/28/2022
	Drawings	12E-3437	Schematic Diagram LPCI Containment Cooling System 1	AO
	Engineering Evaluations	350673	Effects of Elevated Temperatures on the Unit 3 Station Batteries	00
		454497	Unit 3 DG Resistor Degradation	04/27/2022
Procedures	DOS 1300-03	2/3A(B) Isolation Condenser Makeup Pump Quarterly Operability	26	
71111.18	Calculations	DRE98-0077	Dresden HPCI Room Thermal Response with Reduced Room Cooler Capability	001
	Corrective Action Documents	AR 04371250	Part 21: Continuously Energized Eaton D26 Relays	09/22/2020
		AR 04468573	HPCI Signal Converter Mod Temperature Qual Concerns	12/28/2021
		AR 04479219	HPCI Signal Converter - Commercial Grade Dedication Issue	02/18/2022
	Engineering Changes	EC 395525	Replace U2 HPCI Signal Converter and Flow Indicating Controller	008
		EC 397957	Replace U3 HPCI Signal Converter and Flow Indicating Controller	007
	Procedures	LA-AA-104-1001	50.59 Review Coversheet Replace U2 HPCI Signal Converter and Flow Indicating Controller	4
		LS-AA-104-1001	50.59 Review Coversheet Replace U3 HPCI Signal Converter and Flow Indicating Controller	006
		LS-AA-104-1003	50.59 Screening Form Replace Unit 2 HPCI Signal Converter and Flow Indicating Controller	4

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.19	Corrective Action Documents	4491953	Unit 3 IRM 14 Issue	04/10/2022
		4492293	Unit 3 IRM 14 Drawer Mode Switch Needs Repair/Replacement	04/11/2022
	Procedures	DIS 0700-45	IRM Channel Calibration	02
		DOS 0250-02	Full Closure Timing and Exercising of Main Steam Isolation Valves	39
		DOS 0250-03	Main Steam Isolation Valve Fail Safe Closure Test	24
		DOS 0700-02	Intermediate Range Monitor (IRM) Downscale Rod Block Functional Test	19
		DOS 0700-04	IRM Detector Position Rod Block Functional Test	17
		DOS 0700-05	IRM Upscale and Inoperative Functional Testing	15
	Work Orders	1514134	Unit 3 IRM 14 Issue	04/11/2022
		1966818	Disassemble and Inspect 3-1402-13A Per DTP 48 and Perform NDE-UT Unit 3 Division I Core Spray	05/10/2022
		5229976	3A Core Spray Pump Test with Torus Available	05/10/2022
5247737		Unit 3 Drywell Pressure Step Change Up	04/11/2022	
71111.20	Corrective Action Documents	4491749	Unit 3 Drywell Pressure Step Change Up	04/09/2022
		4491934	Unit 3 Condenser Normal Makeup LCV Packing Leak	04/10/2022
		4491970	Unit 3 Mechanical Vacuum Pump Suction Valve Interlock Issues	04/10/2022
		4492781	3-0203-1A Extent of Condition Torque Check	04/13/2022
		4493866	Unit 3 Drywell Iodine Adverse Trend After D3F55	04/18/2022
	Corrective Action Documents Resulting from Inspection	4491932	NRC ID: 3B Reactor Feedwater Pump Inboard Seal Heat Exchanger Leak	04/10/2022
		4492231	Unit 3 Drywell Closeout D3F55	04/11/2022
		71111.22	Procedures	DIS 0500-07
DOS 6600-12	Diesel Generator Tests Endurance and Margin/Full Load Rejection/ECCS/Hot Restart			72
71124.05	Calibration Records	Work Order 04982780-1	24 Month Technical Specification Service Water Effluent Sample Radiation Monitor Calibration	02/07/2022
		Work Order 05007751	Unit 2/3 18 Month Technical Specification Chimney SPING-4 Effluent Monitor Calibration	08/12/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Corrective Action Documents	AR 04427294	Upward Trend in Unit 2 Drywell CAM Activity.	06/03/2021
		AR 04493146	RP EP Instrumentation going out of Calibration	04/14/2022
		AR 04494912	Fastsan and Accuscan II WBC Inoperable	04/22/2022
	Procedures	RP-AA-700	Controls for Radiation Protection Instrumentation	8
		RP-AA-700-1235	Operation and Calibration of the PM-12 Gamma Portal Monitor	5
		RP-AA-700-1240	Operation and Calibration of the Canberra ARGOS-5 Personnel Contamination Monitor	7
		RP-AA-700-1500	Operation and Source Check of the Ludlum 3030P Alpha/Beta Sample Counter	6
		RP-AA-700-1501	Operation and Calibration of the Model SAM-9/11 Small Articles Monitor	6
	RP-DR-905	Operation of the MTF, Refuel Floor and 2/3 Off-Gas Filter Building NMC WIND-2B Continuous Air Monitor	2	
	Self-Assessments	AR 04469158	2022 Radiation Instrumentation Self-Assessment	04/18/2022
71124.07	Miscellaneous		Monthly Report of the Meteorological Monitoring Program at Dresden Nuclear Generating Station	02/2022
			Dresden Nuclear Power Station 2020 Annual Radiological Environmental Operating Report	05/2020
	Procedures	EIML-SPM-1	Sampling Procedures Manual, Environmental Incorporated Midwest Laboratory	16
71151	Miscellaneous		Performance Indicator Data: Barrier Integrity - RCS Identified Leakage	04/01/2021 through 03/31/2022
			MSPI Emergency AC Power Systems Prepared Data Package	04/01/2021 through 03/31/2022
			MSPI HPI Prepared Data Package	04/01/2021 through 03/31/2022
	Procedures	DR-MSPI-01	Reactor Oversight Program MSPI Basis Document	14
	LS-AA-2100	Monthly Data Elements for NRC Reactor Coolant System (RCS) Leakage	6	
71152S	Corrective Action	4489659	Rust Found on Core Spray Piping/Nuts under Unit 2 East	04/02/2022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Documents		LPCI Room Cooler	
		4489931	Unit 2 Standby Coolant Line Recommendation for Guided Wave	04/04/2022
		4489933	Unit 3 Standby Coolant Line Recommendation for Guided Wave	04/04/2022
		4490647	MPT 3 Cooling Missed Opportunity	04/05/2022
		4492766	Engineering to Perform FASA for Raw Water Programs	04/13/2022
		4502154	System Certification Actions for RPS/NI	05/10/2022
		4503201	System Certification Actions for Reactor Recirculation	05/31/2022
		4504158	System Certification Actions for Service Water	06/07/2022
		4504396	System Certification Actions for Main Steam	06/07/2022
		4508872	ERVR4 Offgas Review - Engineering Follow-Up Action Needed	07/01/2022