



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

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

July 27, 2023

Terry Brown
Site Vice President
Energy Harbor Nuclear Corp.
Davis-Besse Nuclear Power Station
5501 N. State Rte. 2, Mail Stop A-DB-3080
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION-INTegrated INSPECTION
REPORT 05000346/2023002

Dear Terry Brown:

On June 30, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Davis-Besse Nuclear Power Station. On July 25, 2023, the NRC inspectors discussed the results of this inspection with you 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,

A handwritten signature in cursive script that reads "Karla K. Stoedter".

Signed by Stoedter, Karla
on 07/27/23

Karla K. Stoedter, Chief
Reactor Projects Branch 2
Division of Operating Reactor Safety

Docket No. 05000346
License No. NPF-3

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

Letter to Terry Brown from Karla Stoedter dated July 27, 2023.

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION-INTEGRATED INSPECTION
REPORT 05000346/2023002

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

Docket Number: 05000346

License Number: NPF-3

Report Number: 05000346/2023002

Enterprise Identifier: I-2023-002-0052

Licensee: Energy Harbor Nuclear Corp.

Facility: Davis-Besse Nuclear Power Station

Location: Oak Harbor, OH

Inspection Dates: April 01, 2023 to June 30, 2023

Inspectors: K. Barclay, Senior Reactor Inspector
T. Briley, Senior Project Engineer
R. Cassara, Acting Senior Resident Inspector
R. Elliott, Senior Project Engineer
D. Mills, Technical Assistant
R. Ng, Senior Project Engineer

Approved By: Karla K. Stodter, Chief
Reactor Projects Branch 2
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 Davis-Besse 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

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

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000346/2021050-06	Potential Adverse Changes During 2006 Emergency Diesel Generator Modifications	71111.21M	Discussed

PLANT STATUS

The unit began the inspection period at rated thermal power. On May 31, 2023, the unit was down powered to 95 percent to perform control rod drive and turbine valve testing. The unit was returned to rated thermal power on June 1, 2023, 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 mayfly seasonal preparations for the following systems:
 - service water system
 - emergency diesel generator (EDG)
 - control room emergency ventilation system

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) Emergency ventilation system train 2 while train 1 was inoperable during the week ending May 27, 2023
- (2) Auxiliary feedwater train 2 during surveillance on train 1 during the week ending June 17, 2023

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

- (1) The inspectors evaluated system configurations during a complete walkdown of the decay heat system during the week ending June 30, 2023

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) Emergency core cooling system pump room 1-1, room 105, fire area AB-01, during the week ending May 27, 2023
- (2) Station blackout diesel generator and associated electrical equipment and fuel oil storage tank rooms during the week ending May 27, 2023
- (3) Radwaste exhaust equipment and main station exhaust fan room, radwaste and fuel handling areas air supply equipment area, purge exhaust equipment room, rooms 501 and 501DC, 500, and 515, fire area EE, during the week ending May 27, 2023
- (4) Main feedwater pump room, room 252, fire area II, during maintenance on auxiliary feed train 1 with motor driven feed pump protected during the week ending June 17, 2023
- (5) Makeup pump room and vestibule, room 225 and 226A, fire area AB during the week ending June 30, 2023

Fire Brigade Drill Performance Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the on-site fire brigade training and performance during an announced fire drill on May 6, 2023

71111.06 - Flood Protection Measures

Flooding Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated internal flooding mitigation protections in the: emergency feedwater facility and manhole 3005 inspection during the week ending May 27, 2023

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (2 Samples)

- (1) The inspectors observed and evaluated licensed operator performance in the control room during an observation during power reduction and feedwater loop demands in hand for delta cold leg temperature integrated controller system module replacement during the week ending April 29, 2023
- (2) The inspectors observed and evaluated licensed operator performance in the control room during power reduction, control rod drive testing, and turbine stop valve testing during the week ending June 3, 2023

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

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

- (1) Structural integrity of watertight door used to maintain operability of service water system during the week ending April 29, 2023
- (2) Station vent normal radiation monitor train 2 pump and pressure transmitter replacement during the week ending May 6, 2023
- (3) Diesel fire pump scheduled maintenance outage during the week ending June 24, 2023

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (4 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) Weekly elevated risk during multiple planned half trip conditions during the week ending April 15, 2023
- (2) Risk assessment for station air compressor 2 outage during the week ending May 13, 2023
- (3) Anticipatory reactor trip system channel 4 isolation card not locked in properly during the week ending May 20, 2023
- (4) Safety features actuation system (SFAS) channel 2 issue during the week ending May 27, 2023

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (2 Samples)

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

- (1) Radiation element RE 4596BA low flow sample test failure operability determination during the week ending May 6, 2023
- (2) SFAS channel 2 power supply failure, CR 2023-04281 during the week ending May 27, 2023

71111.24 - Testing and Maintenance of Equipment Important to Risk

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

Post-Maintenance Testing (PMT) (IP Section 03.01) (9 Samples)

- (1) Motor driven feed pump lube oil cooler during the week ending April 15, 2023
- (2) Station air compressor 2 after scheduled maintenance during the week ending May 13, 2023
- (3) Control room emergency ventilation system after scheduled maintenance during the week ending May 20, 2023
- (4) SFAS channel 2 after power supply replacement during the week ending May 27, 2023
- (5) Boric acid flow transmitter after replacement during the week ending May 27, 2023
- (6) Station blackout diesel generator after scheduled maintenance during the week ending June 17, 2023
- (7) Steam feed rupture control system channel 2 after replacing signal monitor during the week ending June 24, 2023
- (8) EDG 1 after scheduled maintenance during the week ending June 24, 2023
- (9) Diesel fire pump following scheduled maintenance during the week ending June 30, 2023

Surveillance Testing (IP Section 03.01) (4 Samples)

- (1) Steam and feedwater rupture control system steam generator level input channel functional test and device calibration, April 10, 2023
- (2) EDG 1 monthly test during the week ending April 29, 2023
- (3) Auxiliary feedwater train 2 quarterly test during the week ending May 6, 2023
- (4) Station blackout diesel generator monthly tests during the week ending June 17, 2023

Inservice Testing (IST) (IP Section 03.01) (2 Samples)

- (1) Motor driven feed pump quarterly test during the week ending April 15, 2023
- (2) Containment isolation valve 2001 clean and inspect and inservice testing during the week ending May 20, 2023

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

- (1) Quarterly functional test of turbo-marine diesel FLEX generators during the week ending May 13, 2023

INSPECTION RESULTS

URI (Discussed)	Potential Adverse Changes During 2006 Emergency Diesel Generator Modifications URI 05000346/2021050-06	71111.21M
Description: The NRC continues to evaluate an unresolved item documented in inspection report 2021050-06 (ADAMS Accession Number ML21348A767). Generally, the staff is assessing the adequacy of the site's modification associated with the installation of the EDG field flash selector switches.		

EXIT MEETINGS AND DEBRIEFS

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

- On July 25, 2023, the inspectors presented the integrated inspection results to T. Brown, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Procedures	DB-OP-06913	Seasonal Plant Preparation Checklist	42
71111.04	Drawings	OS-0004	Decay Heat Removal/ Low-Pressure Injection System	62
	Procedures	DB-OP-06012	Decay Heat and Low-Pressure Injection System Operating Procedure	85
		DB-OP-06233	Auxiliary Feedwater System	46
		DB-OP-06504	Emergency Ventilation System	21
		DB-SP-03162	Auxiliary Feedwater Train 2 Monthly Valve Verification	11
71111.05	Fire Plans	PFP-AB-105	ECCS Pump Room 101, Rooms 105, Fire Area AB-01	09
		PFP-AB-225	Makeup Pump Room and Vestibule Room 225 and 226A Fire Area AB	05
		PFP-AB-500	Radwaste and Fuel Handling Areas Air Supply Equipment Area - Room 500, Fire Area EE	05
		PFP-AB-501	Radwaste Exhaust Equipment and Main Station Exhaust Fan Room - Room 501 and 501DC, Fire Area EE	06
		PFP-AB-515	Purge Exhaust Equipment Room - Room 515, Fire Area EE	05
		PFP-S6-0000	Service Building 6, Laydown Area, Station Blackout Diesel	04
		PFP-TB-252	Main Feedwater Pump Room (West Condenser Pit) Room 252 Fire Area II	06
	Procedures	NG-DB-00302	DBNPS Fire Protection Program	12
71111.06	Corrective Action Documents	2018-10082	Emergency Feedwater Building Leak	11/12/2018
		2022-00870	Water Leak from Emergency Feedwater Ductwork	02/05/2022
71111.11Q	Corrective Action Documents	2023-03533	Course RCS Tave Control with FW Demand in Manual	
	Miscellaneous	System Status	DB-OP-6902 - Small Power Reduction to Support Controller Work	04/25/2023
	Work Orders	200856520	Main Turbine Stop Valves Periodic Test	05/31/2023
		200856520	Main Turbine Stop Valves Periodic Test	05/31/2023
		200856521	Main Turbine Control Valve	05/31/2023
		200856522	Main Turbine CIV Test	05/31/2023
200901017		CRD Exercise Test	05/31/2023	
71111.12	Procedures	DB-MI-03417	Channel Calibration of RE4598BA Station Vent Normal Range	02

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Radiation Monitor Channel 2	
	Work Orders	200730894	Doors and Hatches, Top and Bottom Latches are Worn	04/22/2023
		200848410	PM 1378 1 Year Inspection Diesel Fire Pump 1-1	04/27/2023
		200913869	Station Vent Radiation Monitoring	05/04/2023
71111.13	Miscellaneous	83C-ISLSP9AB	String Work Package Cover Sheet	22, 23, 24
	Procedures	DB-MI-03246	Channel Functional Test and Device Calibration of SFRCS Steam Generator Level Inputs 83C-ISLSP9A8, A9, B6 and B7 to Actuation Channel 2	21
	Work Orders	200848840	SFRCS ACH 2 SG Level Functional Test	04/10/2023
		200914582	ARTS Channel 4 Isolation Card in C5784D	05/12/2023
		200915830	Unexpected Computer Alarms for SFAS Chanel 2 Q932, Q852, Q952, Q916, Q904, Q912, Q908, Q956, Q936, Q924	05/23/2023
71111.15	Corrective Action Documents	2023-03683	RIC4598BAC Operate LED Failed to Extinguish During Low Flow Test	
		2023-04281	SFAS Channel 2 Output Modules Tripped	05/22/2023
	Drawings	E-16 SH. 2	SFAS Signal Diagram	19
		E-6 SH. 1	SFAS Logic Diagram	34
	Miscellaneous	NOP-ER-3001	Simple Troubleshooting Plan	0
Procedures	DB-OP-06405	SFAS Procedure	16	
71111.21M	Engineering Changes	ECR 05-0095-00	EDG Loading Improvements	5
71111.24	Drawings	M-0060	Auxiliary Feedwater System	60
	Miscellaneous	83C-ISLSP989	String Work Package	02/22/2021
		83C-ISLSP9A6	String Work Package	02/22/2021
		83C-ISLSP9A7	String Work Package	02/22/2021
		83C-ISLSP9B8	String Work Package	02/22/2021
		LY-SP9A7	Steam Generator 2 Startup Level Signal Monitor	18
	Procedures	DB-MI-03245	Channel Functional Test and Device Calibration of SFRCS Steam Generator Level Inputs 83C-ISLSP9A6, A7, B8 and B9 to Actuation Channel 1	22
		DB-SS-03091	Motor Driven Feed Pump Quarterly Test	22
	Work Orders	200669088	Replace SAIC Signal Monitors	05/22/2023
		200713508	PM 0747 MV2001 RPS/SFAS Channel 2	05/15/2023

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		200731257	PM 11824 SAC2 8000 Hour Maintenance	05/26/2023
		200757790	PM 11743 SAC2 4000 Hour Maintenance	05/26/2023
		200844093	MDFP Lube Oil Cooler Lean and Inspect MDFP Coolers	04/11/2023
		200844588	FLEX Diesel Run	05/12/2023
		200845278	Motor Driven Feed Pump Motor Testing	04/11/2023
		200847222	Lube Oil Sample, Diesel Fire Pump Test	04/12/2023
		200848410	Diesel Fire Pump	04/27/2023
		200848816	SBODG Monthly Test	04/15/2023
		200848870	Motor Driven Feed Pump Quarterly Test	04/11/2023
		200850881	HVAC Control Room	05/15/2023
		200851366	EDG Monthly Test	04/27/2023
		200851371	RE4598BA Functional Test	05/04/2023
		200851426	AFP 2 Quarterly Test	05/02/2023
		200852327	CTRM EVS Train 1	05/15/2023
		200856879	SBODG Monthly Test	06/05/2023
		200857600	SFRCS ACH 1 SG level Functional Test	06/20/2023
		200900547	Makeup and Letdown System	05/24/2023
		200915631	Remove Insulation and Heat Trace from FTMU39A	05/23/2023
		200915830	SFAS Channel 2	05/23/2023
		200918226	EDG 1 184 Day Test	06/21/2023