



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

April 19, 2022

EA-21-176

Mr. 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 - CLOSURE OF PRELIMINARY GREATER THAN GREEN FINDING; UNRESOLVED ITEM CONCERNING FIELD FLASH SELECTOR SWITCH (URI 05000346/2022090-01); NRC INSPECTION REPORT 05000346/2022090 AND FEBRUARY 1, 2022 REGULATORY CONFERENCE

Dear Mr. Brown:

This letter provides you the results of our review of the preliminary Greater than Green finding discussed in our previous communication dated December 16, 2021 (ADAMS accession ML21348A767). The NRC has determined that there was no performance deficiency identified in relation to Energy Harbor Nuclear Corp.'s failure to develop a preventive maintenance schedule for the emergency diesel generator (EDG) field flash selector switch (FFSS) at Davis-Besse Nuclear Power Station. An unresolved item (URI) remains surrounding whether Technical Specification Limiting Condition for Operation 3.8.1 was met.

Closure of Preliminary Greater than Green Finding

Our previous communication dated December 16, 2021, described a preliminary Greater than Green finding discussed in Inspection Report No. 05000346/2021091, which identified a possible performance deficiency associated with the failure to develop a preventive maintenance schedule with respect to the FFSS. The report concluded that the failure to maintain the switch led to the long-term degradation of the switch electrical contacts and ultimately contributed to an EDG failure during fast-start testing on May 27, 2021.

At your request, a regulatory conference was held on February 1, 2022, to discuss your views on this issue. A copy of the handouts from this meeting, the additional information you provided after the regulatory conference, and the Summary of the Regulatory Conference Meeting can be found at ADAMS accession number [ML22084A102](#).

The NRC staff conducted independent reviews and considered the information you presented both during and following the February 1, 2022, regulatory conference. After further deliberations on this highly complex issue, the NRC concludes that the cause of the FFSS malfunction is not certain, the licensee's EDG PM schedule decisions were reasonable at the

time of the modification that installed the switch, and the switch failure was not reasonably within the licensee's ability to foresee. Therefore, no performance deficiency exists.

When the FFSS was installed in 2006, Davis-Besse determined that no preventive maintenance activities were required. The NRC concludes that this determination was reasonable at the time given that 1) the switch is a highly reliable component with a rated life of up to 30,000 mechanical cycles; 2) the switch would not be expected to experience that many cycles over the plant life; 3) routine switch operation would be expected to "wipe" contact surfaces, limiting the potential for contact fouling; and 4) when the FFSS was installed there had been no prior plant-specific operating experience with maintenance-related failures of similar switches.

In addition, the NRC observed that the field flash selector switches had operated reliably for over 15 years prior to this failure event.

The corrective actions you discussed at the regulatory conference included replacing the existing FFSS with a new FFSS on May 28, 2021, adding test procedure enhancements to check the electrical continuity of the FFSS after operation, adding a step to the Emergency Operating Procedure to manually override the FFSS, initiating enhanced preventive maintenance to inspect and replace the FFSS if necessary and performing an EDG reliability assessment. These actions appear reasonable to prevent future similar switch failures and may be reviewed in future baseline inspections.

For the foregoing reasons, the NRC determined that there was no performance deficiency associated with failure to develop a preventive maintenance schedule for the inspection of the EDG FFSS. Once the NRC made the determination that no performance deficiency occurred, we discontinued further review of the safety significance of the failure event. Under the Reactor Oversight Process, equipment failures that are not caused by a performance deficiency are considered part of the baseline risk of the facility, in which equipment failures can occasionally occur.

Unresolved Item Concerning Technical Specification Limiting Condition for Operation 3.8.1 (URI 05000346/2022090-01)

The inspectors have identified an URI associated with the implementation of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.8.1 when one EDG may have been inoperable prior to discovery.

On May 27, 2021, the Division 1 EDG failed during performance of the fast-start diesel surveillance test and the EDG was declared inoperable. As a result of the malfunctioning FSSS, the EDG may have been inoperable prior to discovery and a TS LCO 3.8.1 violation may have occurred. This issue is unresolved pending the NRC's additional independent review and evaluation to determine whether a TS LCO violation occurred. The results of our review will be transmitted to you in separate correspondence and will not affect the closure of the preliminary Greater than Green finding relating to the lack of preventive maintenance (URI 05000346/2022090-01).

Update - Unresolved Item Concerning Potential Adverse Changes During 2006 Emergency Diesel Generator Modifications (URI 05000346/2021050-06)

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 of the EDG field flash circuit.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure(s), and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction.

Sincerely,



Signed by Curtis, David
on 04/19/22

David Curtis
Deputy Director, Division of Reactor Safety

Docket No. 05000346
License No. NPF-3

Letter to T. Brown from D. Curtis dated April 19, 2022

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