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March 5, 2021
L-20-240

10 CFR 50.90

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT:
Perry Nuclear Power Plant, Unit No. 1
Docket No. 50-440, License No. NPF-58
License Amendment Request to Adopt TSTF-002, "Relocate the 10 Year Sediment Cleaning of the Fuel Oil Storage Tank to Licensee Control"

In accordance with the provisions of 10 CFR 50.90, Energy Harbor Nuclear Corp. hereby requests a revision to the Technical Specifications (TS) for Perry Nuclear Power Plant, Unit No. 1 (PNPP), which impacts TS Section 3.8, “Electrical Power Systems.”

The proposed change would modify Specification 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," by removing Surveillance Requirement (SR) 3.8.3.6 and placing it under licensee control. The changes are consistent with TSTF-002 approved by the NRC as documented in a letter from William Beckner (Nuclear Regulatory Commission) to James Davis (Nuclear Energy Institute), dated July 16,1998 [Agencywide Documents Access and Management Systems Accession No. ML9807280010].

The enclosure provides a description and assessment of the proposed changes. Attachment 1 of the enclosure provides the existing TS pages marked to show the proposed changes. Attachment 2 of the enclosure provides the existing TS Bases pages marked to show revised text associated with the proposed TS changes and is provided for information only.

Energy Harbor Nuclear Corp. requests NRC review and approval of the proposed LAR by March 31, 2022. The amendment shall be implemented within 60 days following approval.

There are no regulatory commitments contained in this submittal. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Manager – Fleet Licensing, at (330) 696-7208.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 5, 2021.

Sincerely,

Penfield, Rod 55166
site vp
I am approving this document
Mar 5 2021 11:41 AM
DocuSign

Rod L. Penfield

Enclosure: Evaluation of Proposed Change

cc: NRC Region III Administrator
NRC Resident Inspector
NRR Project Manager
Executive Director, Ohio Emergency Management Agency
Utility Radiological Safety Board

Subject: License Amendment Request to Adopt TSTF-002, "Relocate 10 Year Sediment Cleaning of the Fuel Oil Storage Tank to Licensee Control"

ATTACHMENTS:
1. Technical Specification Page Markups
2. TS Bases Markups (for information only)

1.0 DESCRIPTION

Energy Harbor Nuclear Corp. requests adoption of TSTF-002-A, Revision 1, "Relocate the 10 Year Sediment Cleaning of the Fuel Oil Storage Tank to Licensee Control." The Perry Nuclear Power Plant, Unit No. 1 (PNPP) Technical Specifications (TS) would be modified by removing Surveillance Requirement (SR) 3.8.3.6, from Specification 3.8.3 "Diesel Fuel Oil, Lube Oil, and Starting Air."

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

The fuel storage tanks are buried, horizontal, cylindrical, atmospheric tanks. Each tank has a 90,000-gallon storage capacity which is sufficient to operate its corresponding diesel generator for seven days during the postulated emergency reactor shutdown under post-accident conditions. This volume also includes capacity for diesel generator operability testing.

The design of each diesel generator fuel oil storage tank is such that a minimum amount, if any, of entrained sediment would be drawn into the eductor inlet as the result of filling the storage tank during engine operation. The flow currents in this large volume caused by the new oil entering the tank will be very low beyond a few feet from the fill discharge point, and are unlikely to disturb sediment in the remainder of the tank. There will be no stirring action throughout the tank except at the point of discharge from the fill pipe.

2.2 Current Technical Specifications Requirements

Currently, the fuel oil storage tank cleaning is controlled by SR 3.8.3.6. Each fuel oil storage tank is cleaned by draining the fuel, removing the sediment, and cleaning the tank. The frequency is set by the Surveillance Frequency Control Program.

2.3 Reason for the Proposed Change

Under 10 CFR 50.36(c)(2)(ii), “Technical Specifications,” a limiting condition for operation must be included in Technical Specifications for any item meeting one or more of the four included criteria. As a result, existing Technical Specifications requirements that fall within or satisfy any of the criteria in 10 CFR 50.36 must be retained in the TS, while those TS requirements that do not fall within or satisfy these criteria may be removed from the TS and placed in other licensee-controlled documents.

SR 3.8.3.6 is a maintenance activity, and is not a necessary surveillance to demonstrate operability of the diesel generators, and thus does not meet the criteria in 10 CFR 50.36 for retention in the TS.

2.4 Description of the Proposed Change

The proposed change would revise Specification 3.8.3, "Diesel Fuel Oil, Lube Oil, and Starting Air," by removing SR 3.8.3.6 from the Technical Specification and placing it under licensee control. While the current frequency in the PNPP TS differs from the standard technical specification removed in TSTF-002, it does not affect the applicability of the TSTF to the proposed license amendment.

3.0 TECHNICAL EVALUATION

The TS are modified by removal of the SR directing performance of the diesel fuel oil storage tank cleaning to a document that is controlled by the licensee under 10 CFR 50.59, “Changes, tests and experiments.” Fuel oil storage tank cleaning is a maintenance activity and is not a necessary surveillance to demonstrate operability of the diesel generators. As such, the SR does not meet the 10 CFR 50.36 description of a surveillance requirement and can be removed from the TS and placed under licensee control.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

Under 10 CFR 50.36(c)(3), surveillance requirements (SR) are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met. SR 3.8.3.6 is a preventative type of SR involving the sediment cleaning of the fuel oil storage tank and is not a necessary surveillance to demonstrate operability of the diesel generators (DG). It does not meet the criteria in 10 CFR 50.36 for retention in the Technical Specifications (TS).

Title 10 of the Code of Federal Regulations Part 50 (10 CFR 50), Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criteria (GDC) 17, "Electric Power Systems," requires that an onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. It also includes requirements concerning system capacity, capability, independence, redundancy, availability, testability, and reliability. With the proposed changes, fuel oil would continue to be tested in accordance with the appropriate testing methods and intervals. The proposed changes to the Perry Nuclear Power Plant, Unit No. 1 (PNPP) TS do not reduce the conformance with GDC 17 by Energy Harbor Nuclear Corp.

The Energy Harbor Nuclear Corp. fuel oil practices for PNPP are based on Revision 1 of Regulatory Guide (RG) 1.137, “Fuel Oil Systems for Standby Diesel Generators,” and Appendix B of ANSI N195-1976, “Fuel Oil Systems for Standby

Diesel Generators," with exceptions as noted in Section 1.8 of the PNPP Final Safety Analysis Report (FSAR). The proposed changes would result in the ability to use more recently developed and approved standards and methods than those referenced in the RG or the ANSI standard following a review in accordance with 10 CFR 50.59. This has no impact on assuring proper quality of fuel oil and would not impede the ability of Energy Harbor Nuclear Corp. to continue meeting the intent of Regulatory Guide 1.137 at PNPP.

4.2 Precedent

By letter dated May 24, 2017 [Agencywide Documents Access and Management System Accession No. ML17048A184], the NRC issued an amendment to Shearon Harris Nuclear Power Plant, Unit 1 to delete the surveillance requirements associated with the periodic draining, cleaning and visual inspection of the fuel oil storage tank and place them under licensee control.

4.3 No Significant Hazards Consideration Analysis

Energy Harbor Nuclear Corp. has evaluated if a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change removes the surveillance requirement for performing sediment cleaning of diesel fuel oil storage tanks from the Technical Specifications and places it under licensee control. Diesel fuel oil storage tank cleaning is not an initiator of any accident previously evaluated. This change would have no effect on diesel generator fuel oil quality, which is tested in accordance with other Technical Specifications requirements. Removing the diesel fuel oil storage tank sediment cleaning requirements from the Technical Specifications would have no effect on the ability to mitigate an accident.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change does not involve a physical alteration to the plant (no new or different type of equipment would be installed) or a change to

the methods governing normal plant operation. The changes do not alter the assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

The proposed change removes the requirement to clean sediment from the diesel fuel oil storage tank from the Technical Specifications and places it under licensee control. The margin of safety provided by the fuel oil storage tank sediment cleaning is unaffected by this relocation because the quality of diesel fuel oil is tested in accordance with other Technical Specifications requirements. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, Energy Harbor Nuclear Corp. concludes that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed change does not change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or does not change an inspection or surveillance requirement. The proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no

environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

Attachment 1

Technical Specification Page Markups
(1 page follows)

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ a 7 day supply of fuel.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.2	Verify lube oil inventory is ≥ a 7 day supply.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	Verify each required DG air start receiver pressure is ≥ 210 psig.	In accordance with the Surveillance Frequency Control Program
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	In accordance with the Surveillance Frequency Control Program
~~SR 3.8.3.6~~	~~For each fuel oil storage tank:~~ ~~a. Drain the fuel oil;~~ ~~b. Remove the sediment; and~~ ~~c. Clean the tank.~~	~~In accordance with the Surveillance Frequency Control Program~~

Attachment 2

TS Bases Markups (for information only)
(2 pages follow)

BASES

SURVEILLANCE REQUIREMENTS

SR 3.8.3.4 (continued)

≥ 210 psig. For Division 3 DG, this Surveillance is met provided two air start receivers are pressurized ≥ 210 psig. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

SR 3.8.3.5

Microbiological fouling is a major cause of fuel oil degradation. There are numerous bacteria that can grow in fuel oil and cause fouling, but all must have a water environment in order to survive. Periodic removal of water from the storage tanks eliminates the necessary environment for bacterial survival. This is the most effective means of controlling microbiological fouling. In addition, it eliminates the potential for water entrainment in the fuel oil during DG operation. Water may come from any of several sources, including condensation, ground water, rain water, contaminated fuel oil, and from breakdown of the fuel oil by bacteria. Frequent checking for and removal of accumulated water minimizes fouling and provides data regarding the watertight integrity of the fuel oil system. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program.

~~SR 3.8.3.6~~

~~Draining of the fuel oil stored in the supply tanks, removal of accumulated sediment, and tank cleaning are required. The Surveillance Frequency is controlled under the Surveillance Frequency Control Program. This SR is typically performed in conjunction with the ASME Boiler and Pressure Vessel Code, Section XI (Ref. 7), examinations of the tanks. At this time, a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with ASME Code Section 11 Article IWD-5000 will be performed. To preclude the introduction of surfactants in the fuel oil system, the cleaning should be accomplished using sodium hypochlorite solutions, or their equivalent, rather than soap or detergents. This SR is for~~

~~(continued)~~

BASES

SURVEILLANCE REQUIREMENTS

~~SR 3.8.3.6 (continued)~~

~~preventive maintenance. The presence of sediment does not necessarily represent a failure of this SR provided that accumulated sediment is removed during performance of the Surveillance.~~

REFERENCES

1. USAR, Section 9.5.4.

2. Regulatory Guide 1.137.

3. ANSI N195 - 1976.

4. USAR, Chapter 6.

5. USAR, Chapter 15.

7. ASTM Standards: D4057-95 (Reapproved 2000); D1298-85; D975-89; D4176-86; D2276-88.

~~8. ASME, Boiler and Pressure Vessel Code, Section XI.~~