UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 3, 2018

Vice President, Operations
Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES NUCLEAR PLANT – CORRECTION LETTER FOR STAFF ASSESSMENTS ASSOCIATED WITH RESPONSE TO 10 CFR 50.54(f) INFORMATION REQUEST – FLOOD-CAUSING MECHANISM REEVALUATION

Dear Sir or Madam:

The purpose of this letter is to provide corrections to two staff assessments the U.S. Nuclear Regulatory Commission (NRC) issued associated with an Entergy Nuclear Operations, Inc. (Entergy, the licensee) letter dated March 11, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15114A209). Entergy's March 11, 2015, letter provided the response for Palisades Nuclear Plant (Palisades) to a March 12, 2012, NRC request for information that was issued under Title 10 of the *Code of Federal Regulations*, Section 50.54(f). The NRC staff assessments that are being corrected are dated December 23, 2015, and February 14, 2018 (ADAMS Accession Nos. ML15356A765 and ML18037A625, respectively).

Correction to Discussion of Palisades Current Design Basis

Table 1 and Table 3.1-1 of the NRC staff's letters dated December 23, 2015, and February 14, 2018, respectively, state the following regarding storm surge:

Flood Mechanism	Stillwater Elevations, feet (ft.) National Geodetic Vertical Datum of 1929 (NGVD29)	Associated Effects, ft.	Current Design Basis (CDB) Flood Elevation, ft. NGVD29
Storm Surge	594.1	8	602.1

In addition, Section 3.5 of the NRC staff's February 14, 2018, letter states the following regarding the Palisades CDB:

> The CDB probable maximum flood elevation for storm surge is based on a stillwater-surface elevation of 594.1 ft. NGVD29, and an elevation of 602.1 ft. NGVD 29 including wind waves and runup at the lakeward side of the circulation water pipes. The CDB design wave height is 8-ft., producing a combined CDB total water elevation of elevation 602.1 ft. NGVD29 along the lakeward side of the circulation water pipe.

The above descriptions are not an accurate reflection of the Palisades CDB and the associated effects. As stated in Section 3.9.2.1.7 of the licensee's March 11, 2015, flood hazard reevaluation report (FHRR), wave runup height is not measured as height above the stillwater

elevation but is instead measured from the ground elevation near the Screenhouse/Intake Structure.

Table 1 and Table 3.1-1 of the staff's assessment dated December 23, 2015, and February 14, 2018, respectively, are corrected as follows:

Flood Mechanism	Stillwater Elevation, ft. National Geodetic Vertical Datum of 1929 (NGVD29)	Associated Effects, ft.	Current Design Basis (CDB) Flood Elevation, ft. NGVD29
Storm Surge at the Screenhouse/Intake Structure	594.1	~~8~~ (See Note 1)	~~602.1~~ 597.0 (See Note 1)
Storm Surge at locations other than at the Screenhouse/Intake Structure	594.1	Not included in the CDB (See Note 2)	~~602.1~~ 594.1

Note 1: The licensee's CDB includes an evaluation of wave runup (associated effects) at the Screenhouse/Intake Structure. The wave runup is estimated as 8 ft. above the ground surface elevation at that location (elevation 589.0 ft. NGVD29). This results in a maximum CDB elevation of 597.0 ft. NGVD29 at the Screenhouse/Intake Structure.

Note 2: The Screenhouse/Intake Structure was the focal point of the CDB analysis for the storm surge flood-causing mechanism. Associated effects were only calculated at this structure. At other locations, the Palisades CDB elevation for the storm surge flood-causing mechanism is equal to the stillwater elevation.

The staff also corrects Section 3.5 of the February 14, 2018, letter with the following replacement text:

> The Palisades CDB includes an evaluation of the dynamic effect of wave run-up to a height of 597.0 ft NGVD29 at the Screen House/Intake Structure, which is capable of withstanding the loads. The CDB for Palisades evaluated the impact of stillwater storm surge flooding of 594.1 feet on the safety-related service water pumps. The licensee concluded that the service water pumps would be able to perform their intended safety-related function under these flooding conditions.

The staff notes that Table 2, and Table 4.1-1, of the staff's assessment letters dated December 23, 2015, and February 14, 2018, remain correct and are unchanged. These tables provide information regarding the reevaluated hazard elevations for flood-causing mechanisms not bounded by the Palisades CDB and include the following information:

Flood Mechanism	Stillwater Elevations, ft. NGVD29	Associated Effects, ft.	Reevaluated Hazard Elevation, ft. NGVD29
Storm Surge (H.4 Combined Flood Event): Lakeward of Circulation Water Pipes	593.9	8.3	602.2
Landward of Circulation Water Pipes	593.9	0.4	594.3
Landward of Turbine Building	593.9	0.4	594.3
North of Turbine Building	593.9	1.1	595.0

The licensee is expected to apply information contained in Table 2 and Table 4.1-1 associated with a storm surge flood-causing mechanism as part of their flooding mitigation strategies assessment, and the flooding focused evaluation or integrated assessment, as appropriate.

Correction to Table 3.2-1 of the Staff Assessment Dated February 14, 2018

Table 3.2-1 of the staff assessment dated February 14, 2018, is corrected as follows regarding Manhole #4:

ID Number	Description	Ground Surface Elevation, ft. NGVD29	Maximum Flood Elevation, ft. NGVD29	Maximum Flood Depth, ft.	Time to Maximum Flood Elevation (hours)	Bounded (B) or Not Bounded (NB)
28	Manhole #4 (East of Containment Building)	623.9	626.1	2.2	~~0.5~~ 0.2	NB

The staff found the licensee estimate of the time to maximum flood elevation for this location to be reasonable. This duration is 0.2 hours, not 0.5 hours as previously reported.

If you have any questions, please contact me at (301) 415-1132 or via e-mail at Joseph.Sebrosky@nrc.gov.

Sincerely,

Joseph M. Sebrosky, Senior Project Manager
Beyond-Design-Basis Management Branch
Division of Licensing Projects
Office of Nuclear Reactor Regulation

Docket No. 50-255

cc: Distribution via Listserv

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ADAMS Accession No.: ML18086A218 ***via e-mail**

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