



Entergy Nuclear Operations, Inc.  
Palisades Nuclear Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043-9530  
Tel 269 764 2000

Jeffery A. Hardy  
Regulatory Assurance Manager

PNP 2017-050

December 7, 2017

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

SUBJECT: Request to Extend Enforcement Discretion Provided in Enforcement Guidance Memorandum 15-002 for Tornado-Generated Missile Protection Non-Conformances Identified in Response to Regulatory Issue Summary 2015-06, "Tornado Missile Protection"

Palisades Nuclear Plant  
Docket 50-255  
Renewed Facility Operating License No. DPR-20

- REFERENCES:
1. NRC Regulatory Issue Summary 2015-06, *Tornado Missile Protection*, dated June 10, 2015 (ADAMS Accession Number ML15020A419)
  2. NRC memorandum, *Enforcement Guidance Memorandum 15-002, Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance*, dated June 10, 2015 (ADAMS Accession Number ML15111A269)
  3. NRC memorandum, *Enforcement Guidance Memorandum 15-002, Revision 1: Enforcement Discretion for Tornado-Generated Missile Protection Non-Compliance*, dated February 7, 2017 (ADAMS Accession Number ML16355A286)
  4. NRC Interim Staff Guidance DSS-ISG-2016-01, *Clarification of Licensee Actions in Receipt of Enforcement Discretion Per Enforcement Guidance Memorandum EGM 15-002, "Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance," Revision 1*, dated November 2017 (ADAMS Accession Number ML17128A344)

Dear Sir or Madam:

In Reference 1, the NRC issued Regulatory Issue Summary (RIS) 2015-06, "Tornado Missile Protection," to, in part, remind licensees of the need to conform with a plant's current, site-specific licensing basis for tornado-generated missile protection.

In Reference 2, the NRC provided in Enforcement Guidance Memorandum (EGM) 2015-002 guidance to exercise enforcement discretion when an operating power reactor licensee does not comply with a plant's current site-specific licensing basis for tornado-generated missile protection. The NRC would exercise this enforcement discretion only when a licensee implements initial compensatory measures to provide additional protection, followed by more comprehensive, long-term compensatory measures implemented within 60 days of issue discovery. The enforcement discretion would expire three years after issuance of RIS 2015-06, dated June 10, 2015, for plants of a higher tornado missile risk (Group A Plants) and five years after RIS issuance for plants of a lower tornado missile risk (Group B Plants). The EGM categorized Palisades Nuclear Plant (PNP) as a Group A plant.

In Reference 3, the NRC issued Revision 1 of EGM 2015-002 to state that licensees may request an extension to their enforcement discretion expiration date if proper justification is provided. This extension would be granted on a case-by-case basis and should remain in place until compliance is achieved.

In accordance with the revised EGM 2015-002, Revision 1, Entergy Nuclear Operations, Inc. (ENO) hereby requests that the NRC extend the expiration date for the period of enforcement discretion for PNP from June 10, 2018 to June 10, 2020.

ENO has completed a comprehensive assessment for PNP and has identified non-conforming conditions (NCCs) regarding tornado missile protection requirements that affect the operability of structures, systems or components addressed in the PNP Technical Specifications. A summary of the assessment methodology, scope and results is provided in the attachment.

The non-conforming conditions have been documented in the ENO corrective action program in accordance with ENO procedures and all required notifications have been completed, as discussed in the attachment.

Consistent with the guidance provided in NRC Interim Staff Guidance DSS-ISG-2016-01 (Reference 4), initial and comprehensive compensatory measures have been implemented for the PNP NCCs, as described in the attachment. Additionally, a collective review of the comprehensive compensatory measures currently in place, including expected operator actions in response to severe weather and a subsequent loss of offsite power, has been performed to confirm that the site can perform these compensatory measures and operator actions in an effective manner.

These comprehensive compensatory measures will remain in-place until the non-conformances are resolved.

The requested enforcement discretion due date extension would provide ENO sufficient time to address the non-conforming conditions and achieve compliance. ENO has concluded that there is no undue risk associated with the requested extension.

ENO requests NRC approval of this enforcement discretion date extension by March 15, 2018.

This letter identifies no new commitments and no revisions to existing commitments.

Sincerely,



JAH/jse

Attachment: Justification for Request to Extend the Expiration Date for Enforcement Discretion Regarding Tornado Missile Protection Requirements for the Palisades Nuclear Plant

cc: Administrator, Region III, USNRC  
Project Manager, Palisades, USNRC  
Resident Inspector, Palisades USNRC

**PNP 2017-050**

**ATTACHMENT**

**JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE  
FOR ENFORCEMENT DISCRETION REGARDING  
TORNADO MISSILE PROTECTION REQUIREMENTS  
FOR THE PALISADES NUCLEAR PLANT**

10 pages follow

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

#### 1. Introduction

This attachment provides the justification for the Entergy Nuclear Operations, Inc. (ENO) request to extend the expiration date for enforcement discretion regarding tornado missile protection requirements for the Palisades Nuclear Plant (PNP).

In Reference 1, the NRC issued Regulatory Issue Summary (RIS) 2015-06, "Tornado Missile Protection," to, in part, remind licensees of the need to conform with a plant's current, site-specific licensing basis for tornado-generated missile protection.

In Reference 2, the NRC provided in Enforcement Guidance Memorandum (EGM) 2015-002 guidance to exercise enforcement discretion when a licensee does not comply with a plant's current site-specific licensing basis for tornado-generated missile protection. EGM 2015-002 identified PNP as a higher tornado missile risk site (Group A), resulting in an enforcement discretion expiration date of June 10, 2018.

ENO completed a comprehensive tornado missile protection assessment for PNP and has identified non-conforming conditions regarding tornado missile protection requirements. Compensatory measures were implemented to address the non-conforming conditions, in accordance with regulatory guidance.

ENO is requesting an extension to the enforcement discretion expiration date to allow sufficient time to address the non-conforming conditions.

ENO plans to submit a license amendment request (LAR) to request approval for the use of the Tornado Missile Risk Evaluator (TMRE) methodology, currently under development by the industry, for evaluating the identified non-conformances.

This request to extend enforcement discretion was prepared in accordance with guidance in Appendix B of Revision 1 of Interim Staff Guidance DSS-ISG-2016-01 (Reference 3).

#### 2. RIS 2015-06 Assessment Methodology

The methodology followed by ENO for the PNP assessment in response to RIS 2015-06 includes the following three objectives:

- (1) document the PNP current licensing basis (CLB) for tornados and tornado missile protection,
- (2) evaluate the site's conformance with the tornado missile protection CLB through a design review and plant walkdowns, and document any non-conforming conditions, and
- (3) resolve the non-conforming conditions within the ENO corrective action program.

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

#### 3. Summary of CLB for Tornado and Tornado Missile Protection Design

The PNP CLB for tornados and tornado missiles pertinent to the RIS 2015-06 assessment are described in Revision 33 of the PNP Updated Final Safety Analysis Report (UFSAR), Sections 5.3 and 5.5, respectively.

##### CLB for Tornado Protection Design

As discussed in UFSAR Section 5.3, the design basis tornado has a tangential velocity of 300 miles per hour (mph) and a translational velocity of 60 mph, simultaneously combined with a differential pressure of 3 pounds per square inch, gage (psig).

Other than the enclosure over the spent fuel pool, Consumers Design Class 1 structures (containment, auxiliary building and additions, intake structure, auxiliary feedwater pump room, and turbine building electrical penetration enclosure) were designed in accordance with the described wind loads. The enclosure over the spent fuel pool was not designed for tornado loads.

Per UFSAR Section 5.2.2.1, Consumers Design Class 1 structures, systems and components (SSCs) are defined as those SSCs whose failure could cause uncontrolled release of radioactivity or those essential for safe shutdown of the nuclear steam supply system and long-term operation following a loss of coolant accident.

##### CLB for Tornado Missile Protection Design

Per UFSAR Section 5.5.1.1, Consumers Design Class 1 structures were designed, except as noted below, for the following CLB tornado missiles:

- A 4-inch thick by 12-inch wide by 12-foot long wood plank traveling end-on at a velocity of 300 miles per hour (mph).
- An airborne 4,000-pound passenger automobile traveling at a velocity of 50 mph, not more than 25 feet above the ground.

The Consumers Design Class 1 auxiliary building technical support center/electrical equipment room/mechanical equipment room addition was designed to resist the following missiles:

- An 8-pound, 1-inch diameter by 3-foot long steel rod, traveling at a velocity of 317 feet per second (ft/s)
- A 108-pound, 4-inch thick by 12-inch wide by 12-foot long wood plank traveling end on at a velocity of 440 ft/s.
- A 1490-pound, 13.5-inch diameter by 35-foot long utility pole, traveling at a velocity of 211 ft/s.
- An airborne 4000-pound automobile traveling at a velocity of 106 ft/s.

For this addition, neither the automobile nor the utility pole need be considered for any portion of the structures which is 30 feet above the highest ground elevation.

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

#### Systematic Evaluation Program

As discussed in UFSAR Section 5.5.1.3, the capability of the Consumers Design Class 1 structures to resist the effects of tornado missiles was evaluated in Topic III-4.A of the NRC Systematic Evaluation Program (SEP). Additionally, nine Consumers Design Class 1 systems identified as "safe shutdown systems" by the SEP program were evaluated.

The NRC review of the nine Consumers Design Class 1 systems determined that the following safety-related equipment was vulnerable to tornado missiles:

- Condensate storage tank
- Intake and exhaust vents for the emergency diesel generators
- Safety injection and refueling water (SIRW) tank
- Vent stacks for the atmospheric dump valves
- Vent stacks for the main steam safety relief valves

In addition, the steel frame enclosure over the spent fuel pool, the emergency personnel access enclosure, and the compressed air system supply for various Consumers Design Class 1 system valves were determined to be vulnerable to tornado missiles.

The NRC concluded that any damage that might occur to the above-mentioned SSCs would not adversely affect the safe shutdown capability of the plant, as discussed in the UFSAR.

#### **4. RIS 2015-06 Assessment Scope and Results:**

The assessment completed reviews and walk downs for PNP Consumers Design Class 1 structures, which were designed to withstand the tornado missiles specified in the CLB.

The non-conforming conditions, and affected systems, identified by ENO during the design reviews and walkdowns were documented in the following six condition reports within the corrective action program:

##### a. CR-PLP-2017-01248: Service Water System (SWS)

During walkdowns, portions of the SWS were found to be susceptible to tornado-generated missile impacts within the screenhouse. First, five intake fans are located along the exterior of the screenhouse, providing a straight-line path to the SWS common header. Second, several of the ventilation paths provide a straight-line path to the cable tray containing the power to the SWS pumps (P-7A, B, and C). Finally, a roll-up door is located in a position that could allow a missile to impact the SWS pumps, albeit via a somewhat tortuous path due to intervening equipment.

##### b. CR-PLP-2017-01249: Fuel Oil Transfer System

Portions of the safety-related fuel oil transfer system are susceptible to tornado-generated missile impacts. First, the power cables for the fuel oil transfer pumps (P-18A and B) are located in the same cable tray that is susceptible to missile impact in the screenhouse. Second, portions of the fuel oil piping are not located within concrete reinforced structures and therefore would be exposed to tornado

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

missiles. The exposed piping is considered to be safety-related but is not part of the flow path from credited fuel oil storage tank (T-10A) to the emergency diesel generators, so its failure would not affect the supply of fuel oil to the generators.

c. CR-PLP-2017-01250: Emergency Diesel Generator (EDG) Support Systems

During walkdowns of the exterior of the EDG rooms, which are part of the auxiliary building, the vent lines for each of the EDG day tanks (T-25A and T-25B) were found to be unprotected. A missile impact could crimp the vent lines, preventing fuel oil transfer from the day tanks to the EDGs. The vent lines are located in separate compartments, minimizing the potential for coincident failures of the vent lines.

d. CR-PLP-2017-01251: Control Room Heating, Ventilation and Air Conditioning (CRHVAC) Intake

The normal and emergency intake lines for the CRHVAC system equipment are located on the mechanical equipment room and the service building roofs, and are unprotected. These lines could be crimped or incapacitated, affecting CRHVAC operation.

e. CR-PLP-2017-01252: Auxiliary Feedwater (AFW) System Steam Supply

The steam supply line to the steam-driven AFW pump (P-8B) runs through non-Consumers Design Class 1 portions of the turbine building. Although partially shielded by large equipment, this portion of the supply is not adequately protected from tornado-generated missiles, and failure of the steam supply piping could prevent operation of AFW pump P-8B.

f. CR-PLP-2017-01253: Component Cooling Water (CCW) Surge Tank

The CCW system is a closed-loop cooling system for potentially radioactive equipment. The CCW surge tank (T-3) for the system is protected by a 12-inch thick reinforced concrete wall. However, studies have shown that a 12-inch wall is typically not sufficient to prevent damage during a tornado. Loss of the surge tank could potentially cause a loss of CCW inventory.

#### 5. Initial Actions

The following initial actions were taken in response to the identified non-conforming conditions, in accordance with EGM 15-002 and Interim Staff Guidance DSS-ISG-2016-01:

a. The non-conforming conditions were reported by ENO as an eight-hour notification on March 29, 2017 (Event Number 52647) under the following regulations:

- 10 CFR 50.72(b)(3)(ii)(B), "The nuclear power plant being in an unanalyzed condition that significantly degrades plant safety."
- 10 CFR 50.72(b)(3)(v)(A), "Shut down the reactor and maintain it in a safe shutdown condition;"
- 10 CFR 50.72(b)(3)(v)(B), "Remove residual heat;"



## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

- 10 CFR 50.72(b)(3)(v)(D), "Mitigate the consequences of an accident."

The NRC resident inspector was also notified.

- b. Operability determinations were completed and documented in the corrective action program. The non-conforming equipment was initially declared inoperable. Guidance in Revision 1 of EGM 15-002 (Reference 4) was used to declare the equipment operable but non-conforming and to implement enforcement discretion.
- c. Initial compensatory measures were completed per EGM 15-002 and Interim Staff Guidance DSS-ISG-2016-01. The following procedures for performing actions to respond to a tornado were verified to be in-place:
  - Station severe weather emergency and abnormal operating procedures.
  - Station procedures for the use of FLEX equipment to attain and maintain cold shutdown conditions.

In addition, to heighten station awareness, discussions of existing procedural guidance and initial actions for operators to mitigate the risk of a tornado-missile impact for vulnerable systems were added to the operations narrative log. The guidance, which remained in the narrative log until the long-term compensatory measures were implemented, is described below:

General procedural guidance: Abnormal Operating Procedure (AOP) 38, "Acts of Nature," provides procedural requirements in preparation/response to a tornado.

The guidance below assumes that AOP-38 has been entered.

Service water system: The operators are directed to follow AOP-35, "Loss of Service Water," Attachment 3, "Service Water System Pipe Break Isolation," in the event of a loss of SWS inventory.

Component cooling water: Upon receipt of an EK-1172, "Component Cooling Surge T-3 HI-LO Level," low level alarm, Alarm Response Procedure (ARP) 7, "Auxiliary Systems Scheme EK-11 (C-13)," directs the operators to AOP-36, "Loss of Component Cooling." The operators are directed to place the handswitch for non-operating pump(s) from standby to manual. Additional actions include monitoring CCW cooled components, pump discharge pressure, and CCW pump motors (P-52A, B, and C) amperage, and following AOP-36 actions if system performance is degrading.

Fuel oil system: Upon a loss of the fuel oil system, the operators are directed to SOP-22, "Emergency Diesel Generators," Attachment 5, "Alternate Diesel Generator Fuel Oil Supply."

Control room heating, ventilation, and air conditioning: Upon a loss of the CRHVAC, the operators are directed to SOP-24, "Ventilation and Air Conditioning System," Attachment 9, "Alternate Ventilation for Control Room and Cable Spreading Room."

Loss of emergency diesel generator day tank venting: Per ARP-3, "Electrical Auxiliaries and Diesel Generator Scheme EK-05 (EC-11)," ARP-20A, "Diesel

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

Generator 1-1 Scheme EK-20,” and ARP-20B, Diesel Generator 1-2 Scheme EK-30,” the operators are directed, upon receipt of alarms for either EK-0551, “Diesel Gen No. 1-1 Trouble,” or EK-0557, “Diesel Gen No. 1-2 Trouble,” to proceed to the appropriate EDG room to examine the local alarm. If EK-2014, “D/G 1-1 High/Low Fuel Level,” or EK-3014, “D/G 1-2 High/Low Fuel Level,” is alarming, then the operators are directed to secure the affected EDG.

Auxiliary feedwater system: If CV-0522B, “K-8 Steam Supply from E-50A,” is open and PI-0521A, “Aux Feedwater Pump Turb Driver Steam Press,” shows no steam pressure, the operators are directed to close CV-0522B to secure P-8B, “Steam Driven Auxiliary Feedwater Pump.”

- d. Licensee Event Report (LER) 2017-001-00 (Reference 5) was submitted in accordance with 10 CFR 50.73 due to Technical Specification-required equipment that did not meet CLB requirements for protection against tornado missiles.

#### 6. Long-Term Compensatory Measures and Actions Implemented and/or Planned

As long-term comprehensive compensatory measures, the following procedures were revised as described:

- AOP-38 and its associated basis document were revised to address the exposed fuel oil transfer piping by closing an isolation valve. Also, steps were added for alternate vent paths for the EDG day tanks to ensure that EDG day tank venting would be available if the exposed EDG day tank vents were damaged by a tornado missile.
- SOP-24, “Ventilation and Air Conditioning System,” was revised to state that existing guidance for aligning alternate control room ventilation may need to be implemented in the event of a tornado.
- The basis documents for AOP-35 and AOP-36 were revised to heighten awareness that a tornado event may require entry into the procedure, and to identify the potentially unprotected equipment within the SWS and the CCW system.

These long-term comprehensive compensatory measures are in accordance with EGM 15-002 and Interim Staff Guidance DSS-ISG-2016-01, and will remain in-place until the non-conformances are resolved.

#### 7. Assessment of Long-Term Compensatory Measures Coincident with Other Operator Actions

The above long-term compensatory measures established to address the non-conforming conditions and other expected operator actions in response to severe weather and a subsequent loss of off-site power (LOOP) were collectively assessed. This assessment considered the timing and duration of the operator actions specified within the compensatory measures coincident with the other actions the operators may need to perform in response to a severe weather LOOP event.

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

The compensatory measure incorporated in the revision to AOP-38 addresses exposed fuel oil transfer piping by preemptively closing manual valve MV-FO120, "FO Stor Tk T-10A Fill from FO Tk T-926," if the procedure is entered due to a tornado or extreme winds. Closing this valve ensures that fuel oil inventory from backup tank T-926, "Feedwater Purity Fuel Oil Tank," would not be lost due to a postulated missile strike of exposed piping. This action is not a time-critical action and can easily be performed in conjunction with other actions.

In addition, steps were added to AOP-38 to verify that the vent lines for the EDG day tanks are not crimped. If the vent lines are crimped, the procedure directs the operators to open MV-DE115, "D/G 1-1 FO Day Tank T-25A External Fill," and/or MV-DE116, "D/G 1-2 FO Day Tank T-25B External Fill," as appropriate, to align alternate vent paths for the day tanks. These steps would be performed during the operator visual inspections of the EDGs that are already required by the procedure when weather conditions allow.

The revision to SOP-24 adds a note that existing guidance for aligning alternate control room ventilation may need to be implemented in the event of a tornado.

The guidance added to the basis documents for AOP-35 and AOP-36 does not contain any additional operator actions.

The operator actions credited as long-term compensatory measures in the operating procedure revisions are limited and were determined to have minimal impact on other operator actions that may be needed.

The assessment concluded that the implemented long-term compensatory measures along with other beneficial actions in a severe weather LOOP event can be completed without putting unnecessary burden on the operators.

An assessment of time-critical actions/time-sensitive actions (TCAs/TSAs) was also performed. Time-critical actions that occur outside of the control room and that are plausibly necessary concurrent with a high winds/tornado event include isolation of small primary coolant system line breaks outside containment, station battery load stripping for station blackout events, and cross-tying the engineering safeguards system suction header after the containment sump recirculation actuation system has started. These actions are not specifically required following a LOOP or tornado event; however, they were reviewed to provide additional assurance that the added compensatory measures will not hinder ex-control room operator actions for any plausible scenarios. The time-sensitive actions that occur (at least in part) outside of the control room and that are relevant to a LOOP or consequential LOOP from a tornado or high wind event include the reestablishment of un-sequenced loads following loss of offsite power, alignment of the FLEX/B.5.b pump for steam generator makeup, alignment of the primary makeup water storage tank gravity feed to the condensate storage tank by locally opening control valve CV-2008, and the manual start and alignment of the supplemental diesel generator. This TCA/TSA assessment confirmed the ability of site operators to complete the long term compensatory measures, along with TCAs and TSAs, in response to severe weather and a subsequent LOOP.

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

#### 8. Plans for Permanent Resolution

ENO plans to submit a risk-informed LAR for the use of the TMRE methodology, currently in development by the industry. The TMRE methodology would be used to evaluate the identified non-conformances.

In the event that an approved TMRE methodology is not available for use, ENO would consider either the use of the Electric Power Research Institute (EPRI)-developed TORMIS methodology to evaluate the identified non-conforming conditions, or performing plant modifications to eliminate the non-conformances, or a combination of the two.

#### 9. Basis and Reason for Extension Request

In EGM 2015-002 (Reference 2), the NRC provided guidance to exercise enforcement discretion when an operating power reactor licensee does not comply with a plant's current site-specific licensing basis for tornado-generated missile protection. The NRC would exercise this enforcement discretion only when a licensee implements initial compensatory measures to provide additional protection, followed by more comprehensive, long-term compensatory measures implemented within 60 days of issue discovery. The enforcement discretion would expire three years after issuance of RIS 2015-06, dated June 10, 2015, for plants of a higher tornado missile risk (Group A Plants), and five years after RIS issuance for plants of a lower tornado missile risk (Group B Plants). EGM 2015-002 identified PNP as a plant of a higher tornado missile risk; therefore, its enforcement discretion would expire on June 10, 2018.

In Reference 4, the NRC issued Revision 1 of EGM 2015-002, which stated that licensees may request an extension to their enforcement discretion expiration date if proper justification is provided. This extension would be granted on a case-by-case basis.

In accordance with the revised EGM 15-002, ENO is requesting an extension of the expiration date for enforcement discretion at PNP from June 10, 2018 to June 10, 2020.

There is no undue risk associated with this requested extension of the enforcement discretion due date. The identified non-conformances involve limited exposure of equipment to tornado missiles, and, in many of the non-conformances, the equipment is partially protected. In addition, tornado missile scenarios generally do not represent a significant safety concern because their risk is bounded by the initiating event frequency.

A comprehensive assessment of the site regarding tornado missile protection against the current licensing basis has been completed, revealing the non-conformances discussed above. The compensatory actions implemented for the non-conformances are consistent with the guidance in EGM 15-002 and Interim Staff Guidance DSS-ISG-2016-01, and provide assurance that the consequences of the identified non-conformances are minimized until permanently resolved. Additionally, a collective review was performed to confirm that the site operators can perform the long-term compensatory measures coincident with other actions they may need to perform in a severe weather LOOP event without putting unnecessary burden on the operators. These compensatory measures would remain

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

in-place throughout the period of extended enforcement discretion, until the non-conformances are resolved.

The TMRE methodology is being developed by the industry to evaluate tornado missile protection non-conforming conditions. LARs for implementation of the TMRE methodology at several pilot sites are being submitted, with NRC approval of the pilot site LARs not expected until 2018. Once the pilot site LARs have been approved, then other licensees with identified tornado missile protection non-conformances would submit LARs, based on the approved pilot LARs, for implementation of the TMRE methodology to address the non-conformances at their sites.

To address the tornado missile protection non-conformances identified at PNP, ENO would need to perform a TMRE analysis for the non-conformances, and prepare and submit a LAR for use of the TMRE methodology to evaluate the non-conformances. The PNP LAR would be submitted after the LARs for the pilot sites have been approved. If the TMRE methodology did not resolve all of the non-conformances at PNP, then the use of the TORMIS methodology and/or the installation of plant modifications would need to be pursued. This would all need to be completed by the current enforcement discretion expiration date of June 10, 2018. Since NRC approvals of the pilot site LARs are not expected until sometime in 2018, ENO actions to resolve the non-conformances at PNP cannot be reasonably implemented in an orderly and cost-effective manner in the time remaining under the existing enforcement discretion.

The requested enforcement discretion expiration date of June 10, 2020 would allow ENO sufficient time to resolve the tornado missile protection non-conformances and restore the site to compliance. ENO expects that the TMRE analysis will resolve all of the identified non-conformances at PNP. The requested enforcement discretion expiration date of June 10, 2020 would provide sufficient time for ENO to perform a TMRE analysis for the non-conformances, and to submit a LAR for implementation of the TMRE methodology at PNP. ENO has begun performing walkdowns in support of the TMRE analysis, and plans to submit the TMRE LAR in 2019, pending approval of the pilot plant TMRE LARs. If, while performing the TMRE analysis, ENO unexpectedly determines that not all of the non-conformances will be resolved by the TMRE analysis, ENO would have sufficient time before the requested enforcement discretion expiration date of June 10, 2020 to pursue the use of the TORMIS methodology and/or install plant modifications, as discussed above, to resolve the non-conformances.

If conditions arise such that achieving tornado missile protection compliance at PNP within the requested extended period of enforcement discretion is not possible, the NRC would be promptly notified.

## ATTACHMENT

### JUSTIFICATION FOR REQUEST TO EXTEND THE EXPIRATION DATE FOR ENFORCEMENT DISCRETION REGARDING TORNADO MISSILE PROTECTION REQUIREMENTS FOR THE PALISADES NUCLEAR PLANT

#### 10. References

1. NRC Regulatory Issue Summary 2015-06, *Tornado Missile Protection*, dated June 10, 2015 (ADAMS Accession Number ML15020A419)
2. NRC memorandum, *Enforcement Guidance Memorandum 15-002, Enforcement Discretion for Tornado Generated Missile Protection Non-Compliance*, dated June 10, 2015 (ADAMS Accession Number ML15111A269)
3. NRC Interim Staff Guidance, DSS-ISG-2016-01, "Clarification of Licensee Actions in Receipt of Enforcement Discretion Per Enforcement Guidance Memorandum EGM 15-002, Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance," Revision 1, dated November 2017 (ADAMS Accession Number ML17128A344)
4. NRC memorandum, *Enforcement Guidance Memorandum 15-002, Revision 1: Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance*, dated February 7, 2017 (ADAMS Accession Number ML16355A286)
5. License Event Report 2017-001-00, *Inadequate Protection from Tornado Missiles Identified Due to Nonconforming Design Conditions*, dated May 24, 2017 (ADAMS Accession Number ML17144A289)