

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2012-0186; Docket No. 50-293; License No. DPR-35]**

**Entergy Nuclear Operations, Inc., Pilgrim Nuclear Power Station,**

**Issuance of Director's Decision**

Notice is hereby given that the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission (NRC) has issued a Director's Decision on a petition filed by Pilgrim Watch, (hereafter referred to as "the petitioner"). The petition, dated July 19, 2010, as supplemented by letter dated August 6, 2010 (available as Agencywide Documents Access and Management System (ADAMS) Accession No. ML102090024 and ML102210411, respectively), concerns the operation of Pilgrim Nuclear Power Station (Pilgrim), owned by Entergy Nuclear Generation Company and operated by Entergy Nuclear Operations, Inc. (Entergy, the licensee).

The Petitioner requested that the NRC issue a Demand for Information requiring Entergy Nuclear Operations, Inc. (Entergy or the Licensee) to demonstrate that all non-environmentally qualified (non-EQ) inaccessible cables at Pilgrim Nuclear Power Station (Pilgrim) are capable of performing their required function, be it safety or nonsafety-related. The Petitioner further requested that the NRC: (i) certify that the location, age, and repair history of all cables (accessible and inaccessible) have been identified, (ii) ensure that the Licensee monitors all cables before continued operation to demonstrate that the cables can perform their design functions, and (iii) ensure that the Licensee incorporates in its monitoring program, at a minimum, recommendations from certain aging management guidelines and NRC generic guidance. The Petitioner also asked that the NRC commit to verifying, during the license renewal period, Entergy's implementation through routine baseline inspections and to a timely

upgrade of the regulatory guidance for maintaining cable qualification and the verification that the cables can perform their design functions.

As the basis of the request, the Petitioner asserted, in part, the following concerns:

- The NRC regulations require that plant owners ensure that electrical wiring is qualified to perform in the environmental conditions experienced during normal operation and during accidents. Pilgrim has no program today, as required by NRC regulations, to ensure operability of the submerged and/or wetted wires.
- Most electrical cables at Pilgrim have been exposed to significant moisture over the 40 years since their initial construction. The wires, and possibly the connections and splices inside conduits, are designed to operate properly only in a dry environment and are not designed to operate in a moist or wet environment. Thus, there is no assurance that these electrical cables will not fail if they are wet, submerged, or previously exposed to moisture.
- Wires degrade with age, and the oldest wires are most susceptible to degradation. Pilgrim is one of the oldest operating commercial reactors in the country, and the majority of the conduits and wires at Pilgrim were installed during the initial construction. There are no existing methods to ensure operability, short of visual inspection or replacing cables with ones designed to operate in a wet or submerged environment.
- As identified in several pertinent sections of Pilgrim's license renewal application and safety evaluation report, Pilgrim's aging management program, for the period 2012-2032, is insufficient and does not provide reasonable assurance to the public. The Petitioner further stated that compliance with the NRC's regulations is intended to provide reasonable assurance that an electrical wire failure will neither initiate an accident nor make an accident more severe. The Petitioner

also noted that Pilgrim has a long history of cables being submerged and/or wetted with no verification of the long-term operability that provides reasonable assurance of continued operation of these cables.

The NRC sent a copy of the proposed Director's Decision to the petitioner and the licensee for comment on March 20, 2013. The Petitioner and the licensee were asked to provide comments within 30 days on any part of the proposed Director's Decision that was considered to be erroneous or any issues in the petition that were not addressed. Comments were received from the Petitioner and are addressed in an attachment to the final Director's Decision.

The Director of the Office of Nuclear Reactor Regulation denied the petitioner's request to issue a Demand for Information to require Entergy to demonstrate that all inaccessible cables at Pilgrim are capable of performing their functions. The Office has also denied the Petitioner's request for the NRC to take certain actions to demonstrate that accessible and inaccessible cables can perform their design functions. These actions included requests for NRC to certify that (1) all cables have been identified as to their location, age, and repair history, (2) all cables are monitored by the Licensee prior to continued operation, and (3) the Licensee's monitoring program incorporates at a minimum, recommendations for certain aging management guidelines and NRC generic guidance. The NRC staff has determined that the Licensee's programs for cable condition monitoring and managing aging effects of inaccessible power cables have been adequately implemented, to the extent that there is reasonable assurance that cables subject to moisture will be adequately managed during the period of extended operation. The Director's Decision (DD-13-02) under part 2.206 of Title 10 of the *Code of Federal Regulations*, "Requests for Action under This Subpart," explains the reasons for this decision. The complete text is available in ADAMS under Accession No. ML13255A189 for

inspection at the Commission's Public Document Room located at One White Flint North, Public File Area 01 F21, 11555 Rockville Pike (first floor), Rockville, Maryland, and online in the NRC library at <http://www.nrc.gov/reading-rm.html>.

The NRC will file a copy of the Director's Decision with the Secretary of the Commission for the Commission's review in accordance with 10 CFR 2.206. As a provision of this regulation, the Director's Decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Director's Decision in that time.

Dated at Rockville, Maryland, this 26th day of September 2013.

FOR THE NUCLEAR REGULATORY COMMISSION.

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Eric J. Leeds, Director,  
Office of Nuclear Reactor Regulation.