



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PA 19406-2713

December 20, 2016

Mr. John Dent, Site Vice President  
Entergy Nuclear Operations, Inc.  
Pilgrim Nuclear Power Station  
600 Rocky Hill Road  
Plymouth, MA 02360-5508

**SUBJECT: PILGRIM NUCLEAR POWER STATION – EVALUATED EMERGENCY  
PREPAREDNESS EXERCISE INSPECTION REPORT 05000293/2016502**

Dear Mr. Dent:

On November 18, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of the November 16, 2016, evaluated emergency preparedness exercise at your Pilgrim Nuclear Power Station. The NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings were identified.

J. Dent

2

This letter and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Raymond R. McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-293  
License No. DPR-35

Enclosure:  
Inspection Report 05000293/2016502  
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ  
S. Coleman, RAC Chair, FEMA Region I

J. Dent

2

This letter and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Raymond R. McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

Docket No. 50-293  
License No. DPR-35

Enclosure:  
Inspection Report 05000293/2016502  
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ  
S. Coleman, RAC Chair, FEMA Region I

DISTRIBUTION: (via email)

DDorman, RA  
DLew, DRA  
MScott, DRP  
DPelton, DRP  
RLorson, DRS  
JYerokun, DRS  
ABurritt, DRP  
LCline, DRP  
JPfingsten, DRP  
ECarfang, DRP, SRI

BPinson, DRP, RI  
JVazquez, DRP, RI  
ACass, DRP, AA  
JBowen, RI OEDO  
RidsNrrPMPilgrim Resource  
RidsNrrDorLPL1-1 Resource  
ROPReports.Resource  
RKahler, NSIR/EPD  
SLaVie, NSIR/EPD

DOCUMENT NAME: G:\DRS\Plant Support Branch 1\EP INSPECTIONS\BASELINE\2016\EP EX16  
Pilgrim\Pilgrim EP EX 2016 Report .docx  
ADAMS Accession No. **ML16355A321**

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive		<input checked="" type="checkbox"/> Publicly Available	
OFFICE	RI/DRS	RI/DRP	RI/DRS		
NAME	SBarr	ABurritt	RMcKinley		
DATE	12/15/16	12/19/16	12/20/16		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION****REGION I**

Docket No. 50-293

License No. DPR-35

Report No. 05000293/2016502

Licensee: Entergy Nuclear Operations, Inc. (Entergy)

Facility: Pilgrim Nuclear Power Station

Location: 600 Rocky Hill Road  
Plymouth, MA 02360

Dates: November 14 – November 18, 2016

Inspectors: S. Barr, Senior Emergency Preparedness Inspector, Division of  
Reactor Safety (DRS), Region I (Lead)  
J. DeBoer, Emergency Preparedness Inspector, DRS, Region I  
J. Lilliendahl, Senior Emergency Response Coordinator, DRS  
B. Fuller, Senior Operations Inspector, DRS, Region I  
B. Pinson, Resident Inspector, Division of Reactor Projects (DRP), Region I  
J. Vazquez, Acting Resident Inspector, DRP, Region I

Approved By: Raymond R. McKinley, Chief  
Plant Support Branch 1  
Division of Reactor Safety

## **SUMMARY**

Inspection Report 05000293/2016502; 11/14/2016 – 11/18/2016; Pilgrim Nuclear Power Station; Exercise Evaluation – Scenario Review – Performance Indicator Verification.

This report covers an announced inspection conducted by three Region I-based inspectors and two resident inspectors. No findings were identified during the inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

### **Cornerstone: Emergency Preparedness**

No findings were identified.

## REPORT DETAILS

### 1. REACTOR SAFETY

#### Cornerstone: Emergency Preparedness (EP)

#### 1EP1 Exercise Evaluation (71114.01 – 1 sample)

##### a. Inspection Scope

On November 16, 2016, Entergy conducted a biennial Pilgrim emergency preparedness (EP) exercise. The inspectors evaluated the adequacy of Entergy's conduct of the exercise, the performance of Pilgrim's emergency response organization (ERO) to respond to the simulated emergency, and Entergy's capability to assess their own staff performance via a formal critique process, as required by Title 10 of the *Code of Federal Regulations* (CFR) 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

The exercise evaluation consisted of the following review and assessment:

- The adequacy of Entergy's performance in the biennial full-participation exercise regarding the implementation of the risk-significant planning standards described in 10 CFR 50.47(b)(4), (5), (9), and (10), which are: emergency classification; offsite notification; radiological assessment; and protective action recommendations, respectively.
- The overall adequacy of Entergy's emergency response facilities with regard to NUREG-0696, "Functional Criteria for Emergency Response Facilities," and Emergency Plan commitments. The facilities assessed were the Control Room Simulator, Technical Support Center, and Emergency Operations Facility.
- A review of other performance areas, such as: Entergy ERO's recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; utilization of repair and field monitoring teams; interface with offsite agencies; staffing and procedure adequacy; and the overall implementation of the emergency plan and its implementing procedures.
- A review of past performance issues from the last NRC Pilgrim exercise inspection report and Entergy's EP drill reports, to determine the effectiveness of Entergy corrective actions as demonstrated during the November 16, 2016, exercise and to ensure compliance with 10 CFR 50.47(b)(14).
- Entergy's post-exercise critiques, to evaluate Entergy's self-assessment of its ERO performance during the November 16, 2016, exercise and to ensure compliance with 10 CFR Part 50, Appendix E, Section IV.F.2.g.

Documents reviewed for each section of this report are listed in the Attachment.

b. Findings

No findings were identified.

1EP8 Exercise Evaluation – Scenario Review (71114.08 – 1 sample)

a. Inspection Scope

Prior to the November 16, 2016, EP exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario Entergy had submitted to the NRC, to determine if the exercise would test major elements of Pilgrim's Emergency Plan as required by 10 CFR 50.47(b)(14). This overall exercise inspection activity represented the completion of one sample on a biennial cycle.

b. Findings

No findings were identified.

**4. OTHER ACTIVITIES (OA)**

4OA1 Performance Indicator (PI) Verification (71151 – 3 samples)

a. Inspection Scope

The inspectors reviewed data for the Pilgrim EP PIs, which are: (1) Drill and Exercise Performance; (2) ERO Drill Participation; and (3) Alert and Notification System Reliability. The last NRC EP inspection at Pilgrim was conducted in the fourth calendar quarter of 2015, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests from the fourth calendar quarter of 2015 through the third quarter of 2016, to verify the accuracy of the reported PI data. The review of these PIs was conducted in accordance with Inspection Procedure 71151, using the acceptance criteria documented in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 7.

This inspection activity represented the completion of three samples.

b. Findings

No findings were identified.

4OA6 Meetings, including Exit

On November 18, 2016, the inspectors presented the results of this inspection to Mr. J. Dent, Pilgrim Site Vice President, and other members of the Entergy staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

**ATTACHMENT: SUPPLEMENTARY INFORMATION**

## SUPPLEMENTARY INFORMATION

### KEY POINTS OF CONTACT

#### Licensee Personnel

J. Dent, Pilgrim Site Vice President  
D. Calabrese, Emergency Planning Manager

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None.

### LIST OF DOCUMENTS REVIEWED

#### Section 1EP1: Exercise Evaluation

Pilgrim Nuclear Power Station Emergency Plan, Revision 46  
EP-IP-100, Emergency Classification and Notification, Revision 43  
EP-IP-260, Emergency Operations Facility (EOF) Operations, Revision 2  
EN-EP-313, Offsite Dose assessment using the Unified RASCAL Interface, Revision 2  
EP-IP-400, Protective Action Recommendations, Revision 19  
EP-AD-601, Emergency Action Level Technical Bases Document, Revision 7  
Pilgrim Emergency Plan implementing Procedures  
Pilgrim November 18, 2016, Emergency Exercise Scenario Package  
Pilgrim Emergency Preparedness Drill Reports, November 2015- November 2016  
NA16-061, Pilgrim Nuclear Power Station ERO White Team Exercise Report, November 16, 2016

#### Section 1EP8: Exercise Evaluation – Scenario Review

Pilgrim Nuclear Power Station Emergency Plan, Revision 46  
Pilgrim November 16, 2016, Emergency Exercise Scenario Package

#### Section 4OA1: Performance Indicator (PI) Verification

EN-FAP-EP-005, Fleet Administrative Procedure Emergency Preparedness Performance Indicators, Revision 0  
EN-LI-114, Performance Indicator Process, Revision 6  
DEP PI data, October 2015 – September 2016  
ERO Drill Participation PI data, October 2015 – September 2016  
ANS Reliability PI data, October 2015 – September 2016

### LIST OF ACRONYMS

10 CFR	<i>Code of Federal Regulations</i>
EP	emergency preparedness
ERO	Emergency Response Organization
NRC	Nuclear Regulatory Commission, U.S.
PI	performance indicator