UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

August 28, 2018

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

SUBJECT: PILGRIM NUCLEAR POWER STATION – ASSESSMENT FOLLOW-UP LETTER AND UPDATED INSPECTION PLAN (INSPECTION REPORT 05000293/2018005)

Dear Mr. Sullivan:

The NRC completed its quarterly performance assessment of Pilgrim Nuclear Power Station (PNPS) on August 1, 2018, reviewing performance indicators, inspection results, and enforcement actions from July 1, 2017 through June 30, 2018. This letter informs you of the NRC's assessment of your facility during this period and our plans for future inspections. This letter supplements, but does not supersede, the annual assessment letter issued on February 28, 2018.

The NRC determined the performance at PNPS remains in Column 4, or the Multiple/Repetitive Degraded Cornerstone Column, of the NRC's Reactor Oversight Process (ROP) Action Matrix in Inspection Manual Chapter (IMC) 0305, "Operating Reactor Assessment Program." The NRC also determined that Entergy continued to operate PNPS safely and securely, and that additional regulatory action beyond Column 4 was not warranted. Notwithstanding placement remained within Column 4, our review of performance indicators and inspection results for PNPS indicated improved performance over the course of the past 12 months. The NRC observed progress by site leadership through their continued reinforcement of site standards and expectations and conservative decision making. We have also noted progress on the completion of actions stipulated in the recovery plan; however, a significant amount of work related to the performance recovery of PNPS remain for Entergy to be completed. The NRC will inspect and verify that these recovery actions are adequately implemented to support sustainable performance improvement.

In 2017, the NRC completed Inspection Procedure (IP) 95003 inspection, as required by IMC 0305 for all Column 4 plants. The inspection was conducted in three phases ('A' through 'C') (ML16060A018, ML16144A027, and ML17129A217[1]). The results of these inspections were used to inform the performance improvements described in the Confirmatory Action Letter (CAL) issued on August 2, 2017 (ML17214A088), and updated on June 7, 2018 (ML18158A134), and August 23, 2018 (ML18235A028), which confirmed Entergy's commitment

[1] The designation in parentheses refers to an Agencywide Documents Access and Management System (ADAMS) Accession Number. Documents referenced in this letter are publicly available using the Accession Number in ADAMS

to perform specific corrective actions to resolve the causes for the performance decline that led to PNPS's transition to the Multiple/Repetitive Degraded Cornerstone Column. The NRC is in the process of conducting quarterly CAL follow-up inspections, which started in the 4th quarter of 2017, to ensure adequate actions are taken to complete the CAL commitments. The results of these inspections will support the future performance assessments of PNPS that the NRC will use to determine whether the CAL can be closed, and whether, in accordance with IMC 0305, Pilgrim should transition out of Column 4 of the ROP Action Matrix, or the NRC should take additional regulatory action in accordance with IMC 0305. NRC staff is currently finalizing documentation of the results of the third quarterly CAL follow-up inspection. Two additional quarterly CAL follow-up inspections are scheduled between now and the end of 2019 with additional inspections to be scheduled as warranted.

After reviewing PNPS's performance in addressing the White finding related to the 'A' safety relief valve failure during the second CAL follow-up inspection, the NRC concluded that your actions met the objectives of IP 95001, "Supplemental Inspection Response to Action Matrix Column 2 Inputs" (ML18164A224). In accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program," this White finding is closed and will no longer be considered in assessing plant performance. All Column 4 inputs are now closed; however, PNPS will remain within the Multiple/Repetitive Degraded Cornerstone column (Column 4) of the NRC's ROP Action Matrix pending completion of all actions needed to close the CAL.

NRC senior management will continue to conduct quarterly reviews of PNPS performance to assess the effectiveness of improvement efforts. The NRC added resources to support additional inspection at PNPS, and will continue to engage in, Entergy Nuclear Operations, Inc. frequent site visits.

The enclosed inspection plan lists the inspections scheduled through 2019. In addition to the baseline inspections and the CAL inspections, the NRC will conduct IP 60855.1, "Operation of an ISFSI Independent Spent Fuel Storage Installation at Operating Plants." The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. Routine inspections performed by resident inspectors are not included in the inspection plan.

Furthermore, the NRC has taken into consideration your intention to cease operations by June 1, 2019 as part of the inspection planning process. The ROP and Inspection Program provides inherent flexibility to permit inspection sampling adjustments to be made in order to better inform our assessment of performance during this unique period of transition from operating status to permanent shutdown. Any inspections scheduled after the final shutdown date will be reevaluated at that time for applicability. Once you formally notify the NRC that PNPS is permanently shut down and that all fuel has been removed from the reactor vessel, then PNPS will transition from IMC 0305, "Operating Reactor Assessment Program," and IMC 2515, "Light Water Reactor Inspection Program – Operations Phase," to IMC 2561, "Decommissioning Power Reactor Inspection Program." As a result, inspections after June 2019 are tentative; and, the NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

From January 1, 2017 to December 31, 2017, the NRC issued three Severity Level IV Traditional Enforcement Violations for impeding the regulatory process. Therefore, the NRC plans to conduct IP 92723, "Follow-Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," to follow-up on these violations.

Following the completion of the 2017 end-of-cycle assessment, the NRC identified two cross-cutting themes at PNPS associated with the Problem Identification & Resolution Cross-Cutting Area: one theme due to exceeding the threshold of 12 inspection findings (13 total) assigned with cross-cutting aspects in this cross-cutting area for this 12-month assessment period, and the other due to having at least 6 inspection findings (8 total) assigned with the cross-cutting aspect Evaluation [P.2]. This was the only assessment period with which these themes were assigned. As of the completion of this second quarter performance assessment, due to the reduction in the number of associated findings over this 12-month assessment period, PNPS no longer has either of these cross-cutting themes in the Problem Identification & Resolution Cross-Cutting Area.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and the NRC's Public Document Room in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Please contact Anthony Dimitriadis at (610)337-6953 with any questions you have regarding this letter.

Sincerely,

/RA/

David C. Lew
Regional Administrator

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

Enclosure:
Inspection Plan

cc: Distribution via ListServ

SUBJECT: PILGRIM NUCLEAR POWER STATION – ASSESSMENT FOLLOW-UP LETTER AND UPDATED INSPECTION PLAN (INSPECTION REPORT 05000293/2018005) DATED AUGUST 28, 2018

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ADAMS ACCESSION NUMBER: **ML18240A030**

☑ SUNSI Review		☑ Non-Sensitive ☐ Sensitive		☑ Publicly Available ☐ Non-Publicly Available	
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NAME	LCline via email	ADimitriadis	DLew		
DATE	8/24/18	8/24/18	8/27/18		

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IP 22 Inspection Activity Plan Report

Pilgrim

07/01/2018 - 06/30/2020

Unit	Start	End	Activity	CAC	Title	Staff Count
ISFSI LOADING CAMPAIGN INSPECTION						2
1	07/09/2018	07/20/2018	IP 60855	001001	Operation Of An ISFSI	
1	07/09/2018	07/20/2018	IP 60855.1	000590	Operation of an Independent Spent Fuel Storage Installation at Operating Plants	
RP ALARA, AIRBORNE, IP71124.02, IP71124.03						1
1	07/09/2018	07/13/2018	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1	07/09/2018	07/13/2018	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
Annual PIR Sample - HPCI Vibration						1
1	08/13/2018	08/17/2018	IP 71152	000748	Problem Identification and Resolution	
RAD INSTRUMENTATION IP71124.05						1
1	08/27/2018	08/31/2018	IP 71124.05	000729	Radiation Monitoring Instrumentation	
PROTECTIVE STRATEGY, TSR						3
1	08/27/2018	08/31/2018	IP 71130.05	000737	Protective Strategy Evaluation	
1	08/27/2018	08/31/2018	IP 71130.14	000743	Review of Power Reactor Target Sets	
Confirmatory Action Letter 4						5
1	09/10/2018	09/14/2018	IP 92702	000238	Followup On Corrective Actions For Violations And Deviations	
TRIENNIAL FIRE PROTECTION						4
1	10/15/2018	10/19/2018	IP 71111.05T	000696	Fire Protection (Triennial)	
1	10/29/2018	11/02/2018	IP 71111.05T	000696	Fire Protection (Triennial)	
ALARA, AIR ACT, RAD INSTRUM, PI's 71124.02, 03, 05, PR01, OR01						1
1	10/15/2018	10/19/2018	IP 71124.02	000726	Occupational ALARA Planning and Controls	
1	10/15/2018	10/19/2018	IP 71124.03	000727	In-Plant Airborne Radioactivity Control and Mitigation	
1	10/15/2018	10/19/2018	IP 71124.05	000729	Radiation Monitoring Instrumentation	
1	10/15/2018	10/19/2018	IP 71151	000746	Performance Indicator Verification	
IP 92723						1
1	10/29/2018	11/02/2018	IP 92723	000914	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
EP EXERCISE INSPECTION						4
1	11/05/2018	11/09/2018	IP 71114.01	000716	Exercise Evaluation	

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

IP 22 Inspection Activity Plan Report

Pilgrim

07/01/2018 - 06/30/2020

Unit	Start	End	Activity	CAC	Title	Staff Count
EP EXERCISE INSPECTION						4
1	11/05/2018	11/09/2018	IP 71151	001397	Performance Indicator Verification	
Confirmatory Action Letter 5						7
1	12/10/2018	12/14/2018	IP 92702	000238	Followup On Corrective Actions For Violations And Deviations	
RAD HAZARD IP 71124.01						1
1	02/11/2019	02/15/2019	IP 71124.01	000725	Radiological Hazard Assessment and Exposure Controls	
PI&R BIENNIAL						4
1	02/25/2019	03/01/2019	IP 71152B	000747	Problem Identification and Resolution	
1	03/11/2019	03/15/2019	IP 71152B	000747	Problem Identification and Resolution	
ACCESS CONTROL, EQUIP PERF, TRAINING						3
1	04/08/2019	04/12/2019	IP 71130.02	000734	Access Control	
1	04/08/2019	04/12/2019	IP 71130.04	000736	Equipment Performance, Testing, and Maintenance	
1	04/08/2019	04/12/2019	IP 71130.07	000739	Security Training	
1	04/08/2019	04/12/2019	IP 71151	001338	Performance Indicator Verification	
Evaluations of Changes, Tests and Experiments (50.59)						2
1	04/15/2019	04/19/2019	IP 71111.17T	000709	Evaluations of Changes, Tests, and Experiments	
RP DOSE ASSESS IP 71124.04						1
1	04/15/2019	04/19/2019	IP 71124.04	000729	Occupational Dose Assessment	
RAD GAS AND LIQUID EFFLUENT TREATMENT, DOSE ASSESS, 71124.06, 04						1
1	05/13/2019	05/17/2019	IP 71124.04	000729	Occupational Dose Assessment	
1	05/13/2019	05/17/2019	IP 71124.06	000730	Radioactive Gaseous and Liquid Effluent Treatment	
Triennial Heat Sink						1
1	07/15/2019	07/19/2019	IP 71111.07T	000700	Heat Sink Performance -Triennial	
PILGR REQUAL INSP WITH P/F RESULTS						2
1	09/09/2019	09/13/2019	IP 71111.11A	000703	Licensed Operator Requalification Program and Licensed Operator Performance (Annual)	
1	09/09/2019	09/13/2019	IP 71111.11B	000704	Licensed Operator Requalification Program and Licensed Operator Performance (Biennial)	

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IP 22 Inspection Activity Plan Report

Pilgrim

07/01/2018 - 06/30/2020

Unit	Start	End	Activity	CAC	Title	Staff Count
EQ PROGRAM						3
1	11/04/2019	11/08/2019	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
1	11/18/2019	11/22/2019	IP 71111.21N	000714	Design Bases Assurance Inspection (Programs)	
EP PROGRAM INSPECTION						2
1	12/02/2019	12/06/2019	IP 71114.02	000717	Alert and Notification System Testing	
1	12/02/2019	12/06/2019	IP 71114.03	000718	Emergency Response Organization Staffing and Augmentation System	
1	12/02/2019	12/06/2019	IP 71114.05	000720	Correction of Emergency Preparedness Weaknesses and Deficiencies	
1	12/02/2019	12/06/2019	IP 71151	001397	Performance Indicator Verification	
PILGRIM EP EXERCISE INSPECTION						5
1	04/06/2020	04/10/2020	IP 71114.01	000716	Exercise Evaluation	
1	04/06/2020	04/10/2020	IP 71151	001397	Performance Indicator Verification	

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