



Entergy Nuclear Operations, Inc.  
Pilgrim Nuclear Power Station  
600 Rocky Hill Road  
Plymouth, MA 02360

March 6, 2018

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

SUBJECT: Licensee Event Report 2018-002-00, Diesel Generator A Inoperability, a Condition Prohibited by the Plant Technical Specifications

Pilgrim Nuclear Power Station  
Docket No. 50-293  
Renewed License No. DPR-35

LETTER NUMBER: 2.18.013

Dear Sir or Madam:

The enclosed Licensee Event Report 2018-002-00, Diesel Generator A Inoperability, a Condition Prohibited by the Plant Technical Specifications, is submitted in accordance with Title 10 Code of Federal Regulations 50.73.

If you have any questions or require additional information, please contact me at (508) 830-7127.

There are no regulatory commitments contained in this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter J. Miner".

Peter J. Miner  
Manager, Regulatory Assurance

PJM/sc

Attachment: Licensee Event Report 2018-002-00, Diesel Generator A Inoperability, a Condition Prohibited by the Plant Technical Specifications (3 Pages)

TEZZ  
NRR

cc: Mr. David C. Lew  
Acting Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
2100 Renaissance Blvd., Suite 100  
King of Prussia, PA 19406-2713

Mr. John Lamb, Senior Project Manager  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Mail Stop O-8C2A  
Washington, DC 20555

NRC Senior Resident Inspector  
Pilgrim Nuclear Power Station

**Attachment**

Letter Number 2.18.013

Licensee Event Report 2018-002-00

Diesel Generator A Inoperability, a Condition Prohibited by the Plant Technical Specifications

(3 Pages)



**LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

|  |                                     |                          |
|--|-------------------------------------|--------------------------|
| <b>1. FACILITY NAME</b><br>Pilgrim Nuclear Power Station | <b>2. DOCKET NUMBER</b><br>05000293 | <b>3. PAGE</b><br>1 OF 3 |
|--|-------------------------------------|--------------------------|

**4. TITLE** Licensee Event Report 2018-002, Diesel Generator A Inoperable, a Condition Prohibited by the Plant Technical Specifications

| 5. EVENT DATE |     |      | 6. LER NUMBER |                   |         | 7. REPORT DATE |     |      | 8. OTHER FACILITIES INVOLVED |               |
|---------------|-----|------|---------------|-------------------|---------|----------------|-----|------|------------------------------|---------------|
| MONTH         | DAY | YEAR | YEAR          | SEQUENTIAL NUMBER | REV NO. | MONTH          | DAY | YEAR | FACILITY NAME                | DOCKET NUMBER |
| 01            | 05  | 2018 | 2018          | - 002             | - 00    | 03             | 06  | 2018 | N/A                          | 05000 N/A     |
|               |     |      |               |                   |         |                |     |      | FACILITY NAME                | DOCKET NUMBER |
|               |     |      |               |                   |         |                |     |      | N/A                          | 05000 N/A     |

|                                   |  |  |  |   |  |                                |   |  |   |   |  |  |
|-----------------------------------|--|--|--|---|--|--------------------------------|---|--|---|---|--|--|
| <b>9. OPERATING MODE</b><br><br>N | <b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (Check all that apply) |  |  |   |  |                                |   |  |   |   |  |  |
|                                   | <input type="checkbox"/> 20.2201(b)  |  |  | <input type="checkbox"/> 20.2203(a)(3)(i)             |  |                                | <input type="checkbox"/> 50.73(a)(2)(ii)(A) |  |   | <input type="checkbox"/> 50.73(a)(2)(viii)(A) |  |  |
|                                   | <input type="checkbox"/> 20.2201(d)  |  |  | <input type="checkbox"/> 20.2203(a)(3)(ii)            |  |                                | <input type="checkbox"/> 50.73(a)(2)(ii)(B) |  |   | <input type="checkbox"/> 50.73(a)(2)(viii)(B) |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(1)   |  |  | <input type="checkbox"/> 20.2203(a)(4)                |  |                                | <input type="checkbox"/> 50.73(a)(2)(iii)   |  |   | <input type="checkbox"/> 50.73(a)(2)(ix)(A)   |  |  |
| <b>10. POWER LEVEL</b><br><br>100 | <input type="checkbox"/> 20.2203(a)(2)(i)  |  |  | <input type="checkbox"/> 50.36(c)(1)(i)(A)            |  |                                | <input type="checkbox"/> 50.73(a)(2)(iv)(A) |  |   | <input type="checkbox"/> 50.73(a)(2)(x)       |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(2)(ii)   |  |  | <input type="checkbox"/> 50.36(c)(1)(ii)(A)           |  |                                | <input type="checkbox"/> 50.73(a)(2)(v)(A)  |  |   | <input type="checkbox"/> 73.71(a)(4)          |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(2)(iii)  |  |  | <input type="checkbox"/> 50.36(c)(2)                  |  |                                | <input type="checkbox"/> 50.73(a)(2)(v)(B)  |  |   | <input type="checkbox"/> 73.71(a)(5)          |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(2)(iv)   |  |  | <input type="checkbox"/> 50.46(a)(3)(ii)              |  |                                | <input type="checkbox"/> 50.73(a)(2)(v)(C)  |  |   | <input type="checkbox"/> 73.77(a)(1)          |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(2)(v)  |  |  | <input type="checkbox"/> 50.73(a)(2)(i)(A)            |  |                                | <input type="checkbox"/> 50.73(a)(2)(v)(D)  |  |   | <input type="checkbox"/> 73.77(a)(2)(i)       |  |  |
|                                   | <input type="checkbox"/> 20.2203(a)(2)(vi)   |  |  | <input checked="" type="checkbox"/> 50.73(a)(2)(i)(B) |  |                                | <input type="checkbox"/> 50.73(a)(2)(vii)   |  |   | <input type="checkbox"/> 73.77(a)(2)(ii)      |  |  |
|                                   |  |  | <input type="checkbox"/> 50.73(a)(2)(i)(C) |   |  | <input type="checkbox"/> OTHER |   |  | Specify in Abstract below or in NRC Form 366A |   |  |  |

**12. LICENSEE CONTACT FOR THIS LER**

|  |   |
|--|---|
| <b>LICENSEE CONTACT</b><br>Mr. Peter J. Miner – Regulatory Assurance Manager | <b>TELEPHONE NUMBER (Include Area Code)</b><br>(508) 830-7127 |
|--|---|

**13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT**

| CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX | CAUSE | SYSTEM | COMPONENT | MANU-FACTURER | REPORTABLE TO EPIX |
|-------|--------|-----------|---------------|--------------------|-------|--------|-----------|---------------|--------------------|
| B     | SB     | RV        | T020          | Y                  |       |        |           |               |                    |

|  |                                     |       |     |      |
|--|-------------------------------------|-------|-----|------|
| <b>14. SUPPLEMENTAL REPORT EXPECTED</b><br><input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO | <b>15. EXPECTED SUBMISSION DATE</b> | MONTH | DAY | YEAR |
|  |                                     | 06    | 30  | 2018 |

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On January 5, 2018, at 0315 EST a walkdown by Electrical Maintenance of Emergency Diesel Generator (EDG)-A found sparking coming from the outboard slip ring and brush. This sparking was observed while EDG-A was supplying the A5 Bus with power. After the sparking was observed on the EDG-A brush, a Work Order was performed to inspect and replace the brushes and perform slip ring maintenance. Because of the condition of the brush that was sparking it was determined that the EDG-A was inoperable for a period of time greater than its allowed out of service time and would not have met its 30 day mission time.

This report is submitted in accordance with the requirements of Title 10 Code of Federal Regulations 50.73 (a)(2)(i)(B), any operation or condition which was prohibited by the plant's Technical Specifications.

There was no safety significance for this event and the conditions posed no threat to public health and safety because, when discovered, the EDG-A was operating and providing power to the Emergency 4160V Bus A5.



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

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| 1. FACILITY NAME              | 2. DOCKET NUMBER | 3. LER NUMBER |                            |                 |
|-------------------------------|------------------|---------------|----------------------------|-----------------|
| Pilgrim Nuclear Power Station | 05000-293        | YEAR<br>2018  | SEQUENTIAL NUMBER<br>- 002 | REV NO.<br>- 00 |

**NARRATIVE**

**BACKGROUND**

The Standby Alternating Current (AC) Power System consists of two independent AC power sources that are self-contained within the station site and which are independent of offsite power sources. Each standby generator unit is capable of providing sufficient power to its emergency bus, upon failure of all offsite power, to satisfy the load on the bus. Each standby generator unit is designed in accordance with Class I criteria. The generator sets are capable of automatic start at any time and capable of continued operation at rated load, voltage, and frequency until manually stopped. The generator sets have the ability to pick up loads in the sequence and time period outlined in the Final Safety Analysis Report. The generators are capable of being independently synchronized for parallel operation with the unit auxiliary transformer or the startup transformer (preferred AC power source). This synchronization is done manually for system performance tests. Provisions were made in the design to prevent: (a) the electrical interconnection of both generators and (b) the electrical interconnection of either generator with the secondary AC power source.

**EVENT DESCRIPTION:**

On January 5, 2018, at 0315 EST a walkdown by Electrical Maintenance of Emergency Diesel Generator (EDG)-A found sparking coming from the outboard slip ring and brush. This sparking was observed while EDG-A was supplying the A5 Bus with power. After the sparking was observed on the EDG-A brush, a Work Order was performed to inspect and replace the brushes and perform slip ring maintenance. Because of the condition of the brush it was determined that the EDG-A was inoperable for a period of time greater than its allowed out of service time and would not have met its 30 day mission time.

An evaluation is underway and additional information will be provided after the conclusion of this ongoing investigation.

**CAUSE OF THE EVENT**

The cause of this event is still under investigation and will be provided in a supplement to this Licensee Event Report (LER).

**CORRECTIVE ACTIONS**

Immediate corrective action was taken to replace the brushes and to stone polish the outboard slip ring.

Entergy will perform follow-up analysis and/or testing to determine actual brush wear rate.



**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

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|-------------------------------|------------------|---------------|-------------------|---------|
| Pilgrim Nuclear Power Station | 05000-293        | YEAR          | SEQUENTIAL NUMBER | REV NO. |
|                               |                  | 2018          | - 002             | - 00    |

**SAFETY CONSEQUENCES**

There was no safety significance for this event and the conditions posed no threat to public health and safety because, when discovered, the EDG-A was operating and providing power to the Emergency 4160V Bus A5.

There are no consequences to the general safety of the public, nuclear safety, industrial safety or radiological safety from this event.

**REPORTABILITY:**

This report is submitted in accordance with the requirements of Title 10 Code of Federal Regulations 50.73(a)(2)(i)(B), any operation or condition which was prohibited by the plant's Technical Specifications.

**PREVIOUS EVENTS**

A review of the past five years of LERs for Pilgrim Nuclear Power Station did not identify any submittals that were made with the particular reporting requirements as discussed in this LER.

**REFERENCES**

CR-PNP-2018-00112