

PSEG Nuclear, LLC  
ZEC 2 – Hope Creek  
Docket No: ER20080559

Response to Discovery Request: HC-GAIO-0011  
Date: 10/1/2020

Question:

Total annual Unit run-time over the past ten (10) years (hours). Please provide full-year hours online and explain any significant deviation from the five-year average of hours online.

a. Identify all maintenance and refueling outages on an energy year basis over the past ten (10) years (hours).

Attachments Provided Herewith: YES - CONFIDENTIAL

Response:

The attached spreadsheet provides the full calendar-year run-time over the past ten (10) energy years by unit.

- **Hope Creek**
  - Average run hours over the last ten energy years is 8,188 hours per year, or an average of 93.4% of the total hours each year.
  - Yearly deviations from the average run hours are attributable to:
    - Refueling outages: Fall 2019, Spring 2018, Fall 2016, Spring 2015, Fall 2013, Spring 2012, Fall 2010.
    - Unit experienced an approximate 9 day outage in December 2013, related to maintenance on the steam turbine.
  
- **Salem 1**
  - Average run hours over the last five full calendar years is 7,796 hours per year, or an average of 88.9% of the total hours each year.
  - Yearly deviations from the average run hours are attributable to:
    - Refueling outages: Spring 2019, Fall 2017, Spring 2016, Fall 2014, Spring 2013, Fall 2011.
    - Maintenance related outages:
      - Feb-Mar 2020 – 29 day outage to repair the steam generator.
      - Jun-Jul 2016 – 40 day outage to repair baffle bolts
      - Mar 2015 – 7 day outage to repair cooling system
      - Apr-May 2014 – 9 days of outage to repair a transformer issue
      - Apr 2012 – 7 day outage to repair safety valves

- Apr 2011 – 5 days of outage to repair travelling screens
  - Jul 2010 – 17 day outage to repair a fire protection system
- **Salem 2**
    - Average run hours over the last five full calendar years is 7,829 hours per year, or an average of 89.3% of the total hours each year.
    - Yearly deviations from the average run hours are attributable to:
      - Refueling outages: Spring 2020, Fall 2018, Spring 2017, Fall 2015, Spring 2014, Fall 2012, Spring 2011.
      - Maintenance related outages:
        - Sep 2016 – 7 day outage to repair recirculating pumps
        - Jul-Aug 2016 – approximately 30 days of outage to repair a transformer fault
        - Aug 2015 – 5 days of outage to repair circuit breakers
        - Jun-Jul 2014 – 35 day outage to repair coolant system
        - Jun-Jul 2011 – 10 day outage to repair recirculating pumps

Reference file: ZEC Application - GAIO - 11 - Run Time by Energy Year.xlsx

#### **GAIO-11.a**

The data in the attached file is sourced from PJM's eGADS system which is PJM's system of record for outage activity. The tabs provide information on the various types of outages and derates. Data was extracted for the period from June 2010 – May 2020.

Reference file: Nuclear Outages Jun 2010 - May 2020.xlsx