

RS-20-148

10 CFR 26.9

November 24, 2020

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Byron Station, Units 1 and 2  
Renewed Facility Operating License Nos. NPF-37 and NPF-66  
NRC Docket Nos. 50-454 and 50-455

Subject: Subsequent Request for Exemption from Part 26 Work Hours Requirements

- References:
1. NRC Letter from H. Nieh to NEI, "U.S. Nuclear Regulatory Commission Planned Actions Related to the Requirements for Work Hour Controls During the Coronavirus Disease 2019 Public Health Emergency," dated March 28, 2020 (ML20087P237).
  2. NRC Letter from H. Nieh to NEI, "U.S. Nuclear Regulatory Commission Updated Planned Actions Related to Certain Requirements for Operating and Decommissioning Reactor Licensees During the Coronavirus Disease 2019 Public Health Emergency," dated November 10, 2020 (ML20261H515).
  3. Exelon Generation Company, LLC application via the online portal for Byron Station COVID-19 Related Request for Exemption from Part 26 Work Hours Requirements on September 3, 2020 (ML20248H361).
  4. NRC Letter to EGC, "Byron Station, Units 1 and 2 – Exemption from Select Requirements of 10 CFR Part 26 (EPID L-2020-LLE-0139 [COVID-19])", dated September 16, 2020 (ML20253A062).

As a result of the Coronavirus Disease 2019 (COVID-19) public health emergency (PHE), Exelon Generation Company, LLC (EGC) requested NRC approval for Byron Station, Units 1 and 2 (Byron) in Reference 3 to utilize the alternative work hour controls. In Reference 4, the NRC approved the requested exemption from specific requirements of Title 10 of the Code of Federal Regulations (10 CFR) Part 26, "Fitness for Duty Programs," Section 26.205, "Work hours" for Byron. The exemption is effective from 12:00 a.m. on October 4, 2020, until 12:00 a.m. on December 3, 2020.

The alternative controls will support maintaining staffing requirements as a result of recent increase in personnel absence due to COVID-19 positive test results or contact tracing

quarantines that cannot be accommodated by the current work hour control requirements of 10 CFR 26.205(d) to support plant operational safety and security. The increase in COVID-19 cases in the state of Illinois<sup>1</sup> and communities surrounding Byron could impact the station's ability to meet the work hour controls of 10 CFR 26.205(d) in maintaining minimum staffing and ensuring adequate qualified individuals of personnel specified in 10 CFR 26.4(a)(1) through (a)(5) are available to complete necessary operations, tests, inspections, and maintenance in a manner that supports nuclear safety and security. Therefore, EGC has determined a supplement request to extend the exemption period implementation approved in Reference 4 would allow Byron to proactively take steps to ensure added flexibility is available to facilitate further worker and community protection and ensure safe operation during the subsequent exemption period.

An additional period of exemption from the 10 CFR 26.205(d)(1) through (d)(7) requirements is intended to prevent and limit the spread of COVID-19 and to mitigate its effect should Byron staffing be significantly impacted. Byron intends to use the alternative controls, where necessary, to efficiently perform operation, inspection, maintenance and testing activities that cannot be performed in accordance with the Centers for Disease Control and Prevention (CDC) recommendations related to social distancing, mask usage, worker screening, and limiting close proximity work. This practice will reduce the number of people involved in specific activities to limit the potential spread of COVID-19 and supports Byron's continuing efforts to maintain CDC recommendations. In addition, the extended alternative controls will be used to mitigate the staffing impacts should personnel absences challenge required staffing levels during the continuing COVID-19 PHE.

As the U.S. Departments of Homeland Security and Energy have stated in their guidance, the electric grid and nuclear plant operation make up the nation's critical infrastructure similar to the medical, food, communications, and other critical industries. Byron's operation must be conducted such that the plant is available when needed, including during the critical peak winter loads.

In accordance with the References 1 and 2, the following work groups will continue to implement the site-specific alternative work hour controls, as necessary, for the management of fatigue until February 1, 2021:

- 10 CFR 26.4(a)(1) Operators
- 10 CFR 26.4(a)(2) Health Physics and Chemistry
- 10 CFR 26.4(a)(3) Fire Brigade
- 10 CFR 26.4(a)(4) Maintenance
- 10 CFR 26.4(a)(5) Security

Byron's site-specific COVID-19 PHE fatigue-management controls are consistent with the constraints outlined in the References 1 and 2. Byron will continue to follow the fatigue management controls, behavioral observation requirements, and self-declaration allowances

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<sup>1</sup>Effective November 20, 2020, Illinois has elevated to Tier 3 of its COVID-19 Resurgence Mitigation Plan to combat the surge of COVID-19 across all regions of Illinois. Recently, the state has experienced exponential spread of COVID-19 in every region, statewide positivity rate at record highs, and hospitalizations surpassing the Spring 2020 peak (<https://covid19-illinoisgov.cs32.force.com/coronavirus/s/restore-illinois-mitigation-plan>).

currently delineated within the EGC work hour control program and procedures (LS-AA-119, SY-AA-102, SY-AA-103-500).

The information in the following table describes how cumulative fatigue has been managed for the various positions included in the initial alternative work hour controls exemption period approved in Reference 4 and how it will be managed during the extended exemption period.

| 10 CFR     | Positions                    | Additional Information  |
|------------|------------------------------|---|
| 26.4(a)(1) | Operators                    | <p>Operations has 54 Equipment Operators (EO), 27 Nuclear Station Operators (NSO) and 31 Senior Reactor Operators (SRO). The outage schedule consisted of fixed day or night shifts of six (6) twelve (12) hour shifts followed by five (5) twelve (12) hour shifts. The outage rotation ended on 11/1/2020.</p> <p>Additionally, 8 Operators supported Dresden's outage for 17 days. They worked a fixed schedule of either days or nights for four (4) twelve (12) hour shifts with one day off out of five (5) calendar days. Upon their return to Byron, they resumed their online schedule.</p> <p>The online shift rotation is a rotating days and nights schedule for twelve (12) hour durations spread across five independent crews as follows:<br/>           Days Mon-Thur (4 days)<br/>           Nights Mon-Thur (4 nights)<br/>           Days Fri-Sun (3 days)<br/>           Nights Fri-Sun (3 nights)<br/>           Training Mon-Fri (5 days 8 hours)</p> |
| 26.4(a)(2) | Health Physics and Chemistry | <p>Chemistry has 13 technicians. The outage schedule consisted of fixed day or night shifts of six (6) twelve (12) hour shifts for all but two technicians, who were assigned to Radiation Protection. Shifts during the outage were from 0700 to 1900 or 1900 to 0700. The outage schedule ended on 10/23/2020 and online work hours resumed on 10/24/2020.</p> <p>Since the end of the outage, 2 Chemistry Technicians have utilized alternative controls due to call offs from COVID-19 cases.</p> <p>Radiation Protection (RP) has 19 technicians of which 6 are covered workers. The outage schedule consisted of fixed day or night shifts of one week of six (6) twelve (12) hour shifts followed by two weeks of five (5) twelve (12) hour shifts. Shifts during the outage were from 0630 to 1830 or 1830 to 0630. The outage schedule ended on 10/25/2020 and online schedule resumed on 10/26/2020.</p>  |

| 10 CFR     | Positions    | Additional Information   |
|------------|--------------|--|
|            |              | <p>Additionally, 6 RP Technicians supported Dresden's outage for 17 days . Upon their return to Byron, they had a minimum of 2 days off before returning to the online schedule.</p> <p>For both groups, the online schedule has included 8 hour shifts during all days of the week. The shifts are from 0700 to 1500, 1500 to 2300, and 2300 to 0700.</p>   |
| 26.4(a)(3) | Fire Brigade | <p>Operations maintains the required personnel for Fire Brigade. Answers for this portion are included in the Operators position assessment.</p>   |
| 26.4(a)(4) | Maintenance  | <p>Electrical Maintenance Department (EMD) currently has 28 technicians. During the outage, the schedule worked two weeks of six (6) twelve (12) hour shifts followed by one week of five (5) twelve (12) hour shifts. The shifts were fixed day or night shifts that were from 0700 to 1900 or 1900 to 0700 for the technicians. Lead workers started and ended 30 minutes previous to the shift schedule start and end times. The average hours worked per week during the outage were 72 hours. Outage shifts ended on 10/23/2020.</p> <p>Additionally, 12 EMD personnel supported Dresden's outage for 14 days in which technicians received a day off during their second week. Prior to traveling to Dresden the technicians were given extra time off to ensure they were within work hour rules. They returned to Byron and had at least one day off before returning to their online schedule.</p> <p>The online schedule has included 8 hour shifts Monday through Friday. The shifts are from 0700 to 1530, 1500 to 2330, and 2300 to 0730.</p> <p>Instrument Maintenance Department (IMD) currently has 26 technicians. During the outage, the schedule worked two weeks of seven (7) twelve (12) hour shifts followed by one week of five (5) twelve (12) hour shifts. The shifts were either from 0700 to 1900 or 1900 to 0700 for the technicians. Lead workers started and ended 30 minutes previous to the shift schedule start and end times. The average hours worked per week during the outage were 77 hours. Outage shifts ended on 10/23/2020.</p> <p>Additionally, 13 IMD personnel supported Dresden's outage for 14 days in which two days were required off. They returned to Byron and had at least one day off before returning to their online schedule.</p> |

| 10 CFR     | Positions | Additional Information  |
|------------|-----------|---|
|            |           | <p>The online schedule has included 8 hour shifts Monday through Friday. The shifts are from 0700 to 1530, 1500 to 2330, and 2300 to 0730.</p> <p>Mechanical Maintenance Department (MMD) currently has 71 technicians. During the outage, the schedule worked two weeks of six (6) twelve (12) hour shifts followed by one week of five (5) twelve (12) hour shifts. The shifts were either from 0700 to 1900 or 1900 to 0700 for the technicians. Lead workers started and ended 30 minutes previous to the shift schedule start and end times. The average hours worked per week during the outage were 72 hours. Outage shifts ended on 10/20/2020.</p> <p>Additionally, 13 MMD personnel supported Dresden's outage for 14 days in which two days were required off. They returned to Byron and had at least one day off before returning to their online schedule.</p> <p>The online schedule has included 8 hour shifts Monday through Friday. The shifts are from 0700 to 1530, 1500 to 2330, and 2300 to 0730.</p> |
| 26.4(a)(5) | Security  | <p>During the period of exemption beginning on 10/4/2020, Security personnel maintained their normal schedule. Their shifts are fixed either from 0600 to 1800 or 1800 to 0600.</p>   |

There have been no self-declarations or fatigue assessments during the initial exemption period thus far.

The above information provides the requested information for expedited review of subsequent request in accordance with Reference 2.

Upon NRC approval, Byron will continue to implement the alternative controls described in References 1 and 2 for the management of fatigue during the extended exemption period. These controls ensure that covered workers are subjected to the following minimum controls:

- (1) not more than 16 work-hours in any 24-hour period and not more than 86 work-hours in any 7-day period, excluding shift turnover;
- (2) a minimum 10-hour break is provided between successive work periods;
- (3) 12-hour shifts are limited to not more than 14 consecutive days;
- (4) a minimum of 6-days off are provided in any 30-day period; and
- (5) The calculation and days off includes all work hours and days off during the applicable calculation periods, including those work hours and days off preceding initiation of the exemption period; and

- (6) requirements are established for behavioral observation and self-declaration during the period of the exemption.

The requirements of 10 CFR 26.33, "Behavioral observation"; 10 CFR 26.209, "Self-declarations"; and 10 CFR 26.211, "Fatigue assessments" will continue to remain in effect during the extended exemption period. These requirements continue to provide reasonable assurance that should personnel become impaired due to fatigue, requirements and processes are in place to identify the impairment through observation by plant staff or by worker self-declaration, and to assess and address instances of impairment through fatigue assessments.

Upon NRC approval, Byron will continue to implement the alternative controls described in the References 1 and 2 for the management of fatigue until February 1, 2021. Byron Station, Units 1 and 2 are planned to remain operating in MODE 1 during the requested exemption period. The extension beyond the initial exemption period of 60 days will continue to provide Byron with the ability to proactively take steps to ensure added flexibility is available to complete necessary operations, tests, inspections, and maintenance in a manner that supports nuclear safety and security.

In order to expedite continued implementation of the alternative controls' safety benefits, Byron requests written approval of this subsequent request no later than December 3, 2020.

There are no regulatory commitments contained in this letter.

Should you have any questions concerning this letter, please contact Mr. Phillip A. Henderson at (630) 657-4727.

Respectfully,



Dwi Murray  
Sr. Manager Licensing  
Exelon Generation Company, LLC

cc: NRC Regional Administrator, Region III  
NRC Senior Resident Inspector – Byron Station  
Illinois Emergency Management Agency – Division of Nuclear Safety