



Shell Chemical Appalachia LLC
300 Frankfort Rd
Monaca, PA 15061

November 28, 2023

Mark Gorog P.E., Regional Manager Air Quality Program
Pennsylvania Department of Environmental Protection (PADEP)
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

**RE: PA-04-00740C Source IDs 101 and 103 Combustion Turbine/Duct Burners Units #1 and #3
CO Emissions Follow Up Report**

Dear Mr. Gorog,

Shell Chemical Appalachia LLC (“Shell”) is submitting this *follow up* report to the Pennsylvania Department of Environmental Protection (PADEP) to provide a status update of the corrective actions identified in the June 24-27, 2023 Cogen Units #1 and #3¹ excess CO emissions malfunction report, which was submitted on July 26, 2023. All corrective actions are complete, as detailed below.

- **Name and location of the facility**
Shell Polymers Monaca
300 Frankfort Road, Monaca PA, 15061
- **Nature and cause of the incident**
On June 24, 2023, beginning at approximately 06:00, Cogen Unit #3 stack’s CO concentration exceeded the permit limit of 2 ppmvd (1 hour average at 15% O₂). This carried on intermittently until June 26. Similarly, Cogen Unit #1 stack’s CO concentration exceeded 2 ppmvd (1 hour average at 15% O₂) starting on June 25 at 06:00, and this carried intermittently until June 27. Both Cogen units were in a normal mode of operation during these windows. At the time of the malfunction, it was concluded that either combustion engine performance and/or CO catalyst bed health was the root cause of the exceedances.
- **Status of outstanding corrective actions described in the July 26, 2023 letter**
 1. Corrective action pending as of July 26, 2023: Testing Cogen Unit #1 and #3 CO and, if required, tuning.
 - a. This action is complete. In August 2023, a third party was brought onsite to test the Cogen combustion turbines exhaust CO. It was determined that Cogen #1 and #3 CO levels were higher than those of Cogen #2, but still below the manufacturer performance specification. Because of this, no tuning of the combustion turbines was performed.
 2. Corrective action pending as of July 26, 2023: Cleaning of the CO catalyst beds
 - a. This action is complete. During October 2023, all 3 Cogen units were taken down sequentially for maintenance. During the downtime windows, the CO catalyst beds were cleaned. In addition, the selective catalytic reduction (SCR) catalyst beds and corresponding ammonia injection piping/nozzles were cleaned. Core samples of the CO and SCR catalyst beds were collected and sent off for analysis to gauge

¹ Identified as Combustion Turbine/Duct Burners (Source IDs 101 and 103) PA-04-00740C

remaining catalyst system life.

If you have any questions regarding this matter, please contact me at (724) 709-2467 or kimberly.kaal@shell.com.

Sincerely,

Kimberly Kaal
Environmental Manager, Attorney-in-Fact

CC:
Scott Beaudway, Air Quality Specialist
Kristin Goddard, Environmental Compliance Specialist
Beth Speicher, Environmental Group Manager