



Shell Chemical Appalachia LLC
300 Frankfort Rd
Monaca, PA 15061

July 10, 2023

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

RE: Shell Chemical Appalachia LLC Verification of Completion of Steam System Modeling

Dear Mark:

Shell Chemical Appalachia LLC (Shell), located in Beaver County, Pennsylvania is submitting this letter to affirm completion of steam system modeling, as required by the Pennsylvania Department of Environmental Protection's (PADEP) Consent Order and Agreement (COA) effective May 24, 2023.

As of July 7, 2023, Shell has completed build of a UniSim dynamic model of the Shell Polymer Monaca integrated steam system. Multiple operating scenarios have been run in the dynamic model to assess ability to deliver steam to the elevated flare during unit upset conditions. The model has been validated against historical operating conditions at Monaca and used to predict future steam system behavior for operating scenarios not experienced at the site to date. A summary of the model approach, results, and plan to close any identified gaps will be submitted under a separate deliverable per the COA.

If you have any questions or comments concerning the information included in this letter or the attached documentation, please feel free to contact me at kimberly.kaal@shell.com, or (724) 709-2467.

Sincerely,

Kimberly J. Kaal

Kimberly Kaal
Environmental Manager, Attorney in Fact

CC: Pierre Espejo, Shell Senior Legal Counsel
Michael J. Heilman, PADEP Litigation Coordinator
Jim Miller, PADEP SW Regional Manager