



Shell Chemical Appalachia LLC
300 Frankfort Rd
Monaca, PA 15061

September 3, 2020

Melissa L. Jativa, Environmental Engineering Specialist
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

RE: Shell Chemical Appalachia LLC
Shell Polymers Monaca
Potter and Center Townships, Beaver County
Plan Approval Application – Design Updates (PA-04-00740C)
Follow-up to Application Review Discussions

Dear Ms. Jativa:

Shell Chemical Appalachia LLC (“Shell”) is pleased to submit this additional information as a follow-up to recent discussions that resulted from the Department’s review of the supplement to the Design Updates Plan Approval Application submitted to Pennsylvania Department of Environmental Protection (PADEP) on February 14, 2020 and the Technical Information Request Response submitted on April 22, 2020. This group of documents are in support of Shell’s request to incorporate “as-built” changes in design and construction associated with the Shell Polymers Monaca site.

Due to the confidential nature of the information provided, Shell is submitting an original response that contains trade secret and confidential proprietary information as defined by the Pennsylvania Right to Know Law. Three additional copies with redacted confidential information are also provided, and an electronic redacted copy to be provided via file transfer.

Based on the Departments ongoing review of Shell’s February and April 2020 submittals, follow-up discussions have occurred that have resulted in the need for updates/additions to the previously submitted materials, as follows:

- **Attachment A** to the letter provides an update to Table 2-1 and Appendix B Tables B-1 and B-8. These updates resulted from the following changes:
 - Corrected NO_x emission rates for the firewater pump engine (shown in updated Table B-8), and
 - Eliminated of the BGTC natural gas fired emergency generating engine (No. 6 emergency generator), that will no longer be constructed.
- **Attachment B** provides the backup emissions calculations for the following which were inadvertently left out of the prior submittals:
 - Transport Truck Road (Haul Road) Particulate Matter Emissions (Hourly Rates),

- Talc Transport Truck Road Particulate Matter Emissions (Hourly Rates), and
- Talc Transport Truck Road Particulate Matter Emissions (Annual Rate).
- **Attachment C** provides an update to the previously submitted Appendix C – “Air Dispersion Modeling and Class II Visibility Analysis for the Shell Polymers Monaca Site in Beaver County Pennsylvania.” The updated modeling and visibility impacts analysis includes the following revisions:
 - Updated the Process and Cogen cooling tower stack diameter and flow,
 - Lowered CO emission rates for ethane cracking furnaces #3 through #7,
 - Corrected NO_x emission rates for the firewater pump and emergency generator engines, and
 - Eliminated the BGTC natural gas fired emergency generating engine (No. 6 emergency generator), that will no longer be constructed,
 - Included BEEST equivalency demonstration,
 - Included ethane cracking furnace mode runs,
 - Updated emission rates for the two fire water pumps and pellet dryer vent,
 - Included original 2015 Class I SIL runs with comparison of results to results of revised 2020 Class I SIL runs,
 - Jewel Acquisition Meltshop – removed from CO & PM-10 NAAQS analyses because it ceased operation,
 - BASF Thermal Oxidation Unit – corrected stack location, stack height, stack temperature, stack velocity, stack diameter, and added downwash parameters,
 - BASF – location, emission, and downwash data added for Cleaver Brooks Boiler #1 and Cleaver Brooks Boiler #2,
 - Anchor Hocking Melt Tank – corrected stack location, stack height, stack temperature, stack velocity, stack diameter, and downwash parameters,
 - Anchor Hocking Carton Mfg and Batch Plant – corrected stack locations,
 - First Energy Bruce Mansfield (Unit #1&2) – corrected stack location, stack temperature, stack diameter, and downwash parameters,
 - First Energy Bruce Mansfield (Unit #3) – corrected stack location, stack diameter, and downwash parameters,
 - First Energy Bruce Mansfield – Modeled Units 1&2 from a single stack instead of separate flues. Also modeled Unit 3 from a single stack instead of separate flues,
 - IPSCO Koppel Melt Shop – corrected stack location and downwash parameters,
 - Nova Chemical sources – corrected in-stack ratio from 0.2 to 0.5,
 - First Energy Bruce Mansfield Auxiliary Boiler – corrected in-stack ratio from 0.05 to 0.2,
 - Corrected Lawrenceville CO 8-hour background from 1.1 to 1.2 ppm.,
 - Updated Beaver Falls NO₂ 1-hour & annual background data from 2015-2017 to 2016-2018,
 - Corrected Beaver Falls NO₂ 1-hour temporally varying background concentrations,
 - Updated Beaver Falls PM-10 24-hour background from 2015-2017 to 2016-2018,
 - Revised 3DEP terrain data resolution in AERMAP from 1 arc-sec to 1/3 arc-sec (except in Class I SIL runs), and
 - Eliminated off-site sources located in excess of 20km from the Shell site based upon Appendix W and EPA policy.
- **Attachment D** provides an update to the previously submitted Appendix D – “Inhalation Risk Assessment for Shell Polymers Monaca Site.” The updated health risk assessment includes the following changes:
 - Updated the Process and Cogen cooling tower stack diameter and flow,
 - Removed the hexane emissions that were being modeled as emitted from the Cogen Cooling Tower, and
 - Eliminated the BGTC natural gas fired emergency generating engine (No. 6 emergency generator), that will no longer be constructed.

At PADEP's request, the updated modeling files have been electronically submitted to Mr. Andrew Fleck of PADEP. Electronic modeling files have not been sent to the Regional Office. Shell requests that PADEP consider and include this additional information in its review of this Design Updates Plan Approval Application for the Shell Polymers Monaca site. Please contact me at 724-709-2411 or jim.sewell@shell.com or Kim Kaal at 724-709-2467 or kimberly.kaal@shell.com if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "H. James Sewell". The signature is fluid and cursive, with a large, stylized "S" at the end.

H. James Sewell
CSU Environmental Manager