



Pennsylvania  
**Department of  
Environmental Protection**

**MEMO**

**TO** Alexander Sandy  
Air Quality Engineering Specialist  
New Source Review Section  
Air Quality Program  
Southwest Regional Office

**FROM** Henry F. Bonifacio *HFB*  
Air Quality Program Specialist  
Air Quality Modeling and Risk Assessment Section  
Division of Permits  
Bureau of Air Quality

Stephen J. Steirer *SJS*  
Air Quality Engineer  
Air Quality Modeling and Risk Assessment Section  
Division of Permits  
Bureau of Air Quality

**THROUGH** Andrew W. Fleck *AWF*  
Environmental Group Manager  
Air Quality Modeling and Risk Assessment Section  
Division of Permits  
Bureau of Air Quality

**DATE** September 30, 2024

**RE** Determination of Administrative Completeness  
PSD Air Quality Analyses and Inhalation Risk Assessment  
Shell Chemical Appalachia LLC  
Application for Plan Approval 04-00740D  
Shell Polymers Monaca Site  
Center Township and Potter Township, Beaver County

**MESSAGE:**

The Pennsylvania Department of Environmental Protection (DEP) received a plan approval application on September 16, 2024, from Shell Chemical Appalachia LLC (Shell) for several proposals at its Shell Polymers Monaca Site in Center and Potter townships, Beaver County.<sup>1</sup> The plan approval application was prepared by Landau Associates, on behalf of Shell. The

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<sup>1</sup> Plan Approval Application for Shell Polymers Monaca. Shell Chemical Appalachia LLC, Monaca, Pennsylvania. September 13, 2024.

proposals included in the plan approval application are the Ethylene Maximum Achievable Control Technology (EMACT) Project to comply with the revised 40 CFR 63 Subpart YY, the Wastewater Treatment Plant (WWTP) Project to install permanent equipment to improve oil, grease, and volatile organic compounds removal from the wastewater, and the reconciliation of plan approval source descriptions and conditions as well as potential to emit calculations, referred herein as “Plan Approval Reconciliations,” based on Shell’s latest review of its “as-built” equipment and operations. The purpose of this memorandum is to notify the DEP’s Southwest Regional Office that the air quality analyses and inhalation risk assessment portions of Shell’s plan approval application have been determined to be administratively complete.

The DEP is required under 25 *Pa. Code* § 127.12d to “determine if an application for plan approval is administratively complete” and “provide written notice of the completeness determination to the applicant within 30 days of receipt of an application.” Furthermore, this section of the *Pa. Code* states, “an application is administratively complete if it contains the necessary information, maps, fees and other documents requested in the plan approval application, regardless of whether the information, maps and documents would be sufficient to justify issuance of the plan approval.”

According to Shell’s plan approval application, the EMACT Project is subject to the Prevention of Significant Deterioration (PSD) regulations codified in 40 CFR § 52.21. These federal PSD regulations are adopted and incorporated by reference in their entirety in 25 *Pa. Code* § 127.83 and the Commonwealth’s State Implementation Plan codified in 40 CFR § 52.2020. According to 40 CFR § 52.21(b)(22), “[c]omplete means, in reference to an application for a permit, that the application contains all of the information necessary for processing the application.” Relevant to 40 CFR § 52.21(k) through (p) of the PSD regulations, Shell’s plan approval application includes the following air quality analyses relevant to the EMACT Project:

- Source impact analyses of the net emissions increases of carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and particulate matter less than or equal to 2.5 micrometers in diameter (PM-2.5) due to Shell’s project;
- Additional impact analyses of the impairment to visibility, soils, and vegetation due to Shell’s project and associated growth; and
- Initial screening calculations to determine whether the net emissions increases due to Shell’s project would have negligible impacts on air quality related values (AQRV) and visibility in nearby federal Class I areas.

Shell’s plan approval application also includes revisions to the PSD air quality analyses that were included in Shell’s applications for Plan Approval 04-00740A, which was issued by the DEP on June 18, 2015, and Plan Approval 04-00740C, which was issued by the DEP on February 18, 2021. Shell revised the PSD air quality analyses to incorporate the EMACT Project, WWTP Project, and Plan Approval Reconciliations. Relevant to 40 CFR § 52.21(k) through (p) of the

PSD regulations, Shell's plan approval application includes revisions to the following air quality analyses relevant to these projects:

- Source impact analyses of the emissions of CO, NO<sub>x</sub>, and particulate matter less than or equal to 10 micrometers in diameter (PM-10) due to Shell's projects;
- Additional impact analyses of the impairment to visibility, soils, and vegetation due to Shell's projects and associated growth; and
- Initial screening calculations to determine whether the emissions due to Shell's projects would have negligible impacts on AQRVs and visibility in nearby federal Class I areas.

Shell's plan approval application also includes a revision to the inhalation risk assessment that was included in Shell's applications for Plan Approval 04-00740A and Plan Approval 04-00740C. The revised inhalation risk assessment is required by Condition #035 in Section C of both plan approvals. To this end, Shell revised the inhalation risk assessment to incorporate the EMACT Project, WWTP Project, and Plan Approval Reconciliations. Relevant to these projects, Shell's plan approval application includes a revised inhalation risk assessment, which consists of the following:

- Exposure assessment of compounds of potential concern (COPC) utilizing air dispersion modeling; and
- Risk characterization that includes the calculations and evaluations of acute and chronic inhalation risks due to COPCs.

This determination of administrative completeness for the PSD air quality analyses and inhalation risk assessment portions of Shell's plan approval application does not prohibit the DEP from requiring Shell to submit additional information, if determined to be necessary, during the subsequent technical review.

If you have any questions regarding this administrative review, you may contact us ([hbonifacio@pa.gov](mailto:hbonifacio@pa.gov), 717.772.5968 for the PSD air quality analyses and exposure assessment and [ssteirer@pa.gov](mailto:ssteirer@pa.gov), 717.772.5620 for risk characterization) or Andrew Fleck ([afleck@pa.gov](mailto:afleck@pa.gov), 717.783.9243).

cc: Mark Gorog, SWRO Air Quality  
Sheri Guerrieri, SWRO New Source Review  
Viren Trivedi, BAQ Permits  
Sean Wenrich, BAQ New Source Review