

WATER QUALITY MANAGEMENT PERMIT

A. PERMITTEE (Name and Address): Shell Chemical Appalachia LLC 300 Frankfort Road Monaca, PA 15061-2210		CLIENT ID#: 311950	B. PROJECT/FACILITY (Name): Shell Polymers Monaca Site Wastewater Treatment Plant – Permanent Improvement Project	
C. LOCATION (Municipality, County): Potter Township, Beaver County			SITE ID#: 102360	
D. This permit amendment approves the construction and operation of industrial wastewater facilities consisting of: - One (1) 31,783 ft³ settlement drum for emulsion breaking and the separation of light oil and viscous hydrocarbons - Two (2) dissolved nitrogen flotation units for primary treatment of ethylene cracking unit wastewater and pre-treatment polishing - One (1) steam stripper column to remove volatile organic compounds - Chemical storage and feed systems for coagulant and flocculant additions to the settlement drum and dissolved nitrogen flotation units - Associated support systems and facilities including piping, service and standby pumps, vent gas blowers, heat exchangers, residuals storage tanks, etc. as described in the permit application and supporting documentation This permit amendment approves the removal/replacement of the following temporary industrial wastewater treatment facilities: - One (1) WEMCO Depurator Model 84 mechanically induced nitrogen gas flotation unit between the FEOR tanks and bioreactors - One (1) ENVIRO-CELL Model EC-15 hydraulically induced nitrogen gas flotation unit between the FEOR tanks and bioreactors - Coagulant and flocculant additions before the temporary flotation units, as needed Existing facilities will remain unchanged except for new interconnections to provide operational flexibility: - One (1) in-ground concrete diversion box with two screens, underflow and overflow baffles, a pipe oil skimmer, an oil pump, and wastewater transfer pumps - Two (2) 88,300 ft³ flow equalization and oil removal (FEOR) tanks, each with an oil skimmer, oil pump, and a bioreactor feed pump - One (1) 53,685 ft³ recovered oil tank with water draw-off pumps, an oil skimmer, and an oil pump - Chemical feed systems (chemical storage, piping, feed/injection pumps, etc.) - Two (2) extended aeration activated sludge bioreactors, each composed of a concentric tank with: - radially partitioned outer annular compartments with 74,200 ft³ aeration zone and 8,680 ft³ sludge storage zone - a 51,308 ft³ inner, circular, center-fed secondary clarifier - return activated sludge and waste activated sludge pumps - blowers, flocculating mixers, air header, air diffusers, effluent trough and outlet box, scum baffle, surface skimmers, clarifier sludge collection mechanism, and other equipment - One (1) centrifuge for waste activated sludge dewatering - One (1) flow splitter box to distribute flow to the gravity filters - Six (6) two-cell, tertiary, dual-media gravity filters (gravel bed, sand and anthracite) with air scour blowers and a backwash system - One (1) 5,300 ft³ wastewater sump with transfer pumps to collect filter backwash, filter and building drains, and centrate from the centrifuge - One (1) 5,300 ft³ treated effluent sump with effluent pumps - One (1) 342,375 ft³ in-ground concrete tank to collect excess wastewaters from the diversion box that routes wastewaters to the wastewater treatment plant and, if necessary, off-spec effluent and cooling tower blowdown - Accompanying support facilities and backup units (secondary containment structures, pumps, piping, blowers, mixers, instrumentation, etc.) as described in the permit application and supporting documentation				
Pump Stations: _____ Design Capacity: _____ GPM		Manure Storage: Volume: _____ MG Freeboard: _____ inches		Industrial Wastewater Treatment Facility: Annual Average Flow: <u>1.35</u> MGD Design Hydraulic Capacity: <u>1.35</u> MGD Design Organic Capacity: <u>1.895</u> lb/day
E. APPROVAL GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING: Amendments: All construction, operations and procedures shall be in accordance with the Water Quality Management Permit Amendment application dated <u>March 20, 2025</u> and its supporting documentation and addendums, which are hereby made a part of this amendment. Except for any herein approved modifications, all terms, conditions, supporting documentation and addendums approved under Water Quality Management Permit No. <u>0417201</u> dated <u>May 15, 2018</u>, <u>0417201 A-1</u> dated <u>January 25, 2019</u>, and <u>0417201 A-2</u> dated <u>January 4, 2024</u> shall remain in effect. - Permit Conditions Relating to Industrial Wastewater are attached and made part of this permit. - Special Conditions numbered <u>A</u> are attached and made part of this permit.				

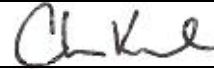
F. THE AUTHORITY GRANTED BY THIS PERMIT IS SUBJECT TO THE FOLLOWING FURTHER QUALIFICATIONS:

1. If there is a conflict between the application or its supporting documents and amendments and the attached conditions, the attached conditions shall apply.
2. Failure to comply with the rules and regulations of DEP or with the terms or conditions of this permit shall void the authority given to the permittee by the issuance of this permit.
3. This permit is issued pursuant to the Clean Streams Law Act of June 22, 1937, P.L. 1987, as amended 35 P.S. §691.1 et seq. Issuance of this permit shall not relieve the permittee of any responsibility under any other law.

PERMIT ISSUED:

JUNE 27, 2025

BY:



TITLE:

Christopher Kriley, P.E.
Clean Water Program Manager
Southwest Regional Office



Pennsylvania
Department of
Environmental Protection

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

PERMIT CONDITIONS RELATING TO INDUSTRIAL WASTEWATER

For use in Water Quality Management Permits

(Check boxes that apply)

General

- ☒ 1. The Department of Environmental Protection (DEP) considers the licensed Professional Engineer whose seal is affixed to the design documents to be fully responsible for the adequacy of all aspects of the facility design.
- ☒ 2. All relevant and non-superseded conditions of any prior Water Quality Management Permits, decrees or orders issued to the permittee or his predecessor shall be continued in full force and effect and together with the provisions of this permit shall apply to his successors, lessees, heirs and assigns.
- ☒ 3. The responsibility for implementing the conditions of this permit shall rest upon the owner, lessee, assignee or other party in responsible managerial charge of the operation producing the wastewaters and waste treatment facilities. Transfer of a permit to a new owner shall not be effective until said transfer has been executed and filed on forms provided by DEP and DEP approved the transfer.
- ☒ 4. The permittee shall secure any necessary permission from the proper federal authority for any outfall or industrial waste treatment structure which discharges into or enters navigable waters and shall obtain a separate permit for any stream crossing, encroachment or change of natural stream conditions within the jurisdiction of DEP.
- ☒ 5. When construction of the approved facilities is completed and before they are placed in operation, the permittee shall notify DEP in writing so that a DEP representative may inspect the facilities.
- ☒ 6. The approval of the plans, and the authority granted in this permit, if not specifically extended, shall cease and be null and void 5 years from the issuance date of this permit unless construction or modification of the facilities covered by this permit has begun on or before the fifth anniversary of the permit date.
- ☒ 7. The authority granted by this permit is subject to all effluent requirements, monitoring requirements and other conditions as set forth in the NPDES Permit and all subsequent amendments and renewals. No discharge is authorized from these facilities unless approved by an NPDES Permit.
- ☒ 8. Nothing herein shall be construed to be an intent on the part of DEP to approve any present or future act by the permittee, inconsistent with the permittee's lawful powers or with existing laws of this Commonwealth regulating industrial wastes and the practice of professional engineering. This permit shall not be construed to sanction any act otherwise forbidden by any of the laws of the Commonwealth of Pennsylvania or of the United States.

Construction

- ☒ 9. This permit is issued under the authorization of The Clean Streams Law and 25 Pa. Code Chapter 91. The permittee shall obtain all necessary permits, approvals and/or registrations under 25 Pa. Code Chapters 102, 105 and 106 prior to commencing construction of the facilities authorized by this permit, as applicable. The permittee should contact the DEP office that issued this permit if there are any questions concerning the applicability of additional permits.
- ☒ 10. The facilities shall be constructed under expert engineering supervision and competent inspection, in accordance with plans, designs and other data as herein approved or amended and with the conditions of this permit.
- ☒ 11. A Pennsylvania licensed Professional Engineer shall certify that construction of the permitted facilities was completed in accordance with the application and design plans submitted to DEP, using the "Post Construction Certification" form (3800-PM-WSFR0179a). It is the permittee's responsibility to ensure that a Professional Engineer is on-site to provide the necessary oversight and/or inspections to certify the facilities. The certification must be submitted to DEP before the facility is placed in operation. As-built drawings, photographs (if available) and a description of all deviations from the application and design plans must be submitted to DEP within 30 days of certification.

- ☒ 12. The DEP office that issued this permit must be contacted during construction if significant changes are proposed to the approved facilities. Significant changes include, but are not limited to changes to the type(s) of process(es) used for treatment and changes to the design capacities of tanks, impoundments, and conveyance structures or equipment by more than 5% of the original design. For projects involving PENNVEST funding, all changes should be discussed with the DEP project manager prior to implementation. DEP may require the submission of an application to amend this permit. All changes shall be documented in an attachment to the Post Construction Certification form.
- ☐ 13. The local Waterways Conservation Officer of the Pennsylvania Fish and Boat Commission (PFBC) shall be notified when the construction of any stream crossing and/or outfall is started and completed. A written permit must be secured from the PFBC if the use of explosives in any waterways is required and the local Waterways Conservation Officer must be notified when explosives are to be used.

Operation and Maintenance

- ☒ 14. If at any time the industrial waste treatment facility, or the discharge of the effluent creates a public nuisance, or such discharge is causing or contributing to pollution of the waters of this Commonwealth, the permittee shall immediately adopt remedial measures acceptable to DEP.
- ☒ 15. The permittee shall maintain records of "as-built" plans showing all the treatment facilities as actually constructed together with facility operation and maintenance (O&M) manuals and any other relevant information that may be required. Upon request, the "as-built" plans and O&M manuals shall be filed with DEP.
- ☒ 16. To ensure operational efficiency and protect the waters of this Commonwealth, the permittee shall maintain skilled operators at all times.
- ☒ 17. No stormwater, sewage or other industrial wastes not specifically approved herein shall be admitted to the facilities for which this permit is issued.
- ☒ 18. These industrial waste treatment facilities shall be operated and maintained to perform as designed. In order to ensure the efficiency and proper maintenance of the treatment facilities, the permittee shall make periodic inspections to detect any impairment of structural stability, adequate capacity or other requisites which might impair the effectiveness of the approved facilities.
- ☒ 19. Collected screenings, slurries, sludge and other solids shall be handled and disposed of in compliance with Title 25 Pa. Code Chapters 287, 288, 291, 297 and 299 (related to permits and requirements for land filling, land application, incineration and storage of industrial sludge), Federal Regulations 40 CFR 257 and the Federal Clean Water Act and its amendments.

SPECIAL CONDITIONSWater Quality Management Permit No. 0417201 A-3

Shell Chemical Appalachia LLC

- A. Pursuant to 25 Pa. Code § 91.33(b), if an incident causing or threatening pollution occurs and the permittee determines that the immediate deployment of emergency-use treatment systems is necessary to prevent injury to property and downstream users of waters of the Commonwealth, then the permittee shall include with the written incident report required by 25 Pa. Code § 92a.41(b) and 40 CFR § 122.41(l)(6) a description of the emergency-use treatment systems.

If operation of the emergency-use treatment systems continues on a temporary basis for more than 30 days from the date of initial deployment, then the permittee shall submit to the Department a written request to continue operating the emergency-use treatment systems as additional temporary treatment systems. The written request must include design details for the additional temporary treatment systems including plans, drawings, and/or specifications that depict the sizes, dimensions, and capacities of the additional temporary treatment systems, and a narrative description of their purpose and operation that allows the bases of design to be thoroughly understood and checked. Any plans, reports, and specifications submitted with the written request shall be prepared by a licensed professional engineer authorized to practice in this Commonwealth and shall bear imprint or legible facsimile of the engineer's seal.

The permittee shall submit an application to amend this Water Quality Management permit to authorize any additional temporary treatment systems if notified by the Department to make such submission.



**WATER QUALITY MANAGEMENT
POST CONSTRUCTION CERTIFICATION**

PERMITTEE IDENTIFIER	
Permittee	Shell Chemical Appalachia LLC
Municipality	Potter Township
County	Beaver
WQM Permit No.	0417201, Amendment No. 3
Facility Type	Industrial Waste
All of the above information should be taken directly from the Water Quality Management Permit.	
CERTIFICATION	
This certification must be completed and returned to the permits section of the DEP's regional office issuing the WQM permit within 30 days of completion of the project and received by DEP prior to operation, and if requested, as-built drawings, photographs (if available) and a discussion of any DEP-approved deviations from the design plans during construction.	
I, being a Registered Professional Engineer in Pennsylvania, do hereby certify to the best of my knowledge and belief, based upon personal observation and interviews, that the above facility approved under the Water Quality Management Permit has been constructed in accordance with the plans, specifications and modifications approved by DEP.	
Construction Completion Date (MM/DD/YYYY): _____	
Engineer's Seal	Professional Engineer
	Name _____ (Please Print or Type)
	Signature
	Date
	License Expiration Date
	Firm or Agency
	Telephone
	Permittee or Authorized Representative
	Name _____ (Please Print or Type)
	Signature
	Title
	Telephone