



February 28, 2018

Mr. Paul Corrigan  
DTE Midstream Appalachia, LLC  
333 Technology Drive, Suite 255  
Canonsburg, PA 15317

Re: Water Obstruction & Encroachment Permit  
Birdsboro Pipeline  
DEP File No. E06-717  
APS No. ID No. 938374  
Birdsboro Borough and Union, Amity, Oley, and Rockland Townships, Berks County

Dear Mr. Corrigan

Enclosed is your copy of your State Water Obstruction and Encroachment Permit (WOEP). Please review this permit so that you are aware of the extent of authorization and the conditions that apply to that authorization. The Department will provide you with an acknowledgement letter upon receipt of the fully signed Acknowledgement of Appraisal of Permit Conditions.

Please be advised that you do not have Federal authorizations for this project and such authorization is required prior to starting your project. In accordance with procedures established with the U.S. Army Corps of Engineers, you will be contacted directly by the Corps regarding Federal Authorization.

**This WOEP is not effective until a copy of the Acknowledgment of Appraisal of Permit Conditions, signed by you, is received by the Department. Any work conducted prior to the Department's receipt of the signed Acknowledgment of Appraisal of Permit Conditions is a violation of the Dam Safety and Encroachments Act and the Clean Streams Law, and you may be subject to fines and penalties pursuant to those Acts.**

A copy of the Permit, Acknowledgment of Appraisal of Permit Conditions, the Erosion and Sediment Control plan, this Issuance Letter, and any other applicable State and Federal authorizations, must be maintained on site during construction and available at the work site for inspection upon request by any officer or agent of the Department or any other Federal, State, County and Municipal agency.

A Completion Report must be submitted to this office within 30 days of completion of the approved project. The Completion Report form must be signed by you and the supervising engineer indicating that the work has been completed as approved.

Any person aggrieved by this action may file a petition for review pursuant to Section 19(d) of the federal Natural Gas Act, 15 U.S.C. § 717r(d), with the Office of the Clerk, United States Court of Appeals for the Third Circuit, 21400 U.S. Courthouse, 601 Market Street, Philadelphia, PA 19106-1790 as provided by law. This paragraph does not, in and of itself, create a right of appeal beyond that permitted by applicable statutes and decisional law. Important legal rights are at stake, so you should show this document to a lawyer promptly.

If you have additional questions, please contact Michael Pedrick at 717.705.4820.

Sincerely,



Scott R. Williamson  
Program Manager  
Waterways & Wetlands Program

Enclosures

cc: U.S. Army Corps of Engineers, Philadelphia  
Pa. Fish & Boat Commission  
Berks County Conservation District  
Kevin Rucker, Dawood Engineering, Inc.

Commonwealth of Pennsylvania  
Department of Environmental Protection  
Southcentral Regional Office  
Waterways and Wetlands Program

**WATER OBSTRUCTION AND ENCROACHMENT PERMIT**

The Department of Environmental Protection "DEP", established by the Act of December 3, 1970, P.L. 834 (71 P.S. § 510-1 et seq.) and empowered to exercise certain powers and perform certain duties under and by virtue of the Act of November 26, 1978, P.L. 1375, as amended by the Act of October 23, 1979, P.L. 204 (32 P.S. § 693.1 et seq.) known as the "Dam Safety and Encroachments Act"; Act of October 4, 1978, P.L. 851, (32 P.S. § 679.101 et seq.) known as the "Flood Plain Management Act"; Act of June 22, 1937, P.L. 1987, (35 P.S. § 691.1 et seq.), known as "The Clean Steams Law"; and the Administrative Code, Act of April 9, 1929, P.L. 177, as amended, which empowers DEP to exercise certain powers and perform certain duties by law vested in and imposed upon the Water Supply Commission of Pennsylvania and the Water and Power Resources Board, hereby issues this permit to:

Mr. Paul Corrigan  
DTE Midstream Appalachia, LLC  
333 Technology Drive, Suite 255  
Canonsburg, PA 15317

DTE Midstream Appalachia, LLC, 333 Technology Drive, Canonsburg, PA 15317. Birdsboro Pipeline, in Birdsboro Borough and Union, Amity, Oley, and Rockland Townships, Berks County, ACOE Philadelphia District. The project starts at Armorcast Road (Birdsboro, PA Quadrangle N: 40°, 16', 15.98"; W: 75°, 47', 36.79)"and ends at Forgedale Road (Fleetwood, PA Quadrangle N: 40 °, 24', 38.93"; W: 75 °, 45', 38.6)"

The project consists of the installation and maintenance of approximately 13.2-mile-long, 12-inch pipeline and appurtenant structures. The project impacts in Berks County include a total of 1,068 linear feet of permanent impacts to the Schuylkill River (WWF, MF), three (3) Unnamed Tributaries to the Schuylkill River (WWF, MF), nineteen (19) Unnamed Tributaries to Monocacy Creek (WWF, MF), two (2) crossings of Monocacy Creek (WWF, MF), four (4) Unnamed Tributaries to Manatawny Creek (CWF, MF), Little Manatawny Creek (CWF, MF), and an Unnamed Tributary to Little Manatawny Creek (CWF, MF), and 2.06 acre of floodway impacts, and temporarily impact 0.22 acre of floodway; 2.42acre of permanent impacts to PEM, PFO, and PSS wetland(s). 1.07 acres of PFO and PSS wetland conversion to PSS and PEM is proposed in Berks County which will be offset by plantings and enhancement of 3.72 acres of EV PEM wetland adjacent to Bieber Creek in Oley and Pike Townships, Berks County to mitigate for the conversion of PSS and PFO wetlands. The proposed project impacts in this permit application are associated with a proposed transmission pipeline project extending approximately 13.2 miles in Pennsylvania between Birdsboro Borough, Berks County, PA and Rockland Township, Berks County, PA.

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The issuance of this permit also constitutes approval of a Water Quality Certification under Section 401 of the Federal Water Pollution Control Act [33 U.S.C.A. 1341(a)].

This permit is issued in response to an application filed with DEP on the 13th day of April A.D. 2017, and with the understanding that the work shall be performed in accordance with the maps, plans, profiles and specifications filed with and made a part of the application on the 4th day of May A.D. 2017, 9th day of November A.D. 2017, 26th day of December A.D. 2017, 18th day of January A.D. 2017, 9th day of February A.D. 2017, and the 15<sup>th</sup> day of February A.D. 2018, subject, however, to the provisions of the Dam Safety and Encroachments Act, the Flood Plain Management Act, The Clean Streams Law, the Administrative Code, the rules and regulations promulgated thereunder and the following conditions and restrictions. If the work authorized by this permit is not completed on or before the 31st day of December A.D. 2023, this permit, if not previously revoked or specifically extended by DEP in writing, shall become void without further notification.

1. The permittee shall sign the Acknowledgement of Appraisal of Permit Conditions thereby expressly certifying the permittee's acceptance of, and agreement to comply with, the terms and conditions of this permit. The permittee shall return a signed copy of the Acknowledgement of Appraisal of Permit Conditions to DEP. Unless the Acknowledgement of Appraisal of Permit Conditions form is completed and filed with DEP, this permit is void;
2. DEP, in issuing this permit, has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and DEP may, in addition, institute appropriate legal proceedings;
3. This permit does not give any property rights, either in real estate or material, nor any exclusive privileges, nor shall it be construed to grant or confer any right, title, easement, or interest in, to, or over any land belonging to the Commonwealth of Pennsylvania "Commonwealth"; neither does it authorize any injury to private property or invasion of private rights, nor any infringement of Federal, State, or Local laws or regulations; nor does it obviate the necessity of obtaining Federal assent when necessary;
4. The work shall at all times be subject to supervision and inspection by representatives of DEP, and no changes in the maps, plans, profiles, and specifications as approved shall be made except with the written consent of DEP. DEP, however, reserves the right to require such changes or modifications in the maps, plans, profiles, and specifications as may be considered necessary to assure compliance with the Dam Safety and Encroachments Act and other laws administered by DEP, the Pennsylvania Fish Commission and any river basin commission created by interstate compact. DEP further reserves the right to suspend or revoke this permit for failure to comply with a provision of 25 Pa. Code Chapter 105, an administrative order of DEP or a term or condition of this permit;
5. This permit authorizes the construction, operation, maintenance and normal repair of the permitted structures conducted within the original specifications for the water obstruction or encroachment, and in accordance with the regulations of DEP and terms and conditions of this permit. Any repairs or maintenance involving modifications of the water obstruction or encroachment from its original

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specifications, and any repairs or reconstruction involving a substantial portion of the structure as defined by regulations of DEP shall require the prior written approval and permit of DEP;

6. All construction debris, excavated material, brush, rocks, and refuse incidental to this work shall be removed entirely from the stream channel and placed either on shore above the influence of flood waters, or at such dumping ground as may be approved by DEP;
7. There shall be no unreasonable interference with the free discharge of the river or stream or navigation during construction;
8. If future operations by the Commonwealth of Pennsylvania require modification of the structure or work, or if, in the opinion of DEP, the structure or work shall cause unreasonable obstruction to the free passage of floodwaters or navigation, the permittee shall, upon due notice, remove or alter the structures, work or obstructions caused thereby, without expense to the Commonwealth, so as to increase the flood carrying capacity of the channel or render navigation reasonably free, easy, and unobstructed, in such manner as DEP may require. No claim shall be made against the Commonwealth on account of any such removal or alteration;
9. The permittee shall notify DEP, in writing, of the proposed time for commencement of work at least 15 days prior to the commencement of construction;
10. If construction work has not been completed within the time specified in the permit and the time limit specified in the permit has not been extended in writing by DEP or if this permit has been revoked for any reason, the permittee shall, at his own expense and in a manner that DEP may prescribe, remove all or any portion of the work as DEP requires and restore the water course and floodplain to their former condition;
11. The permittee shall fully inform the engineer or contractor, responsible for the supervision and conduct of work, of the terms, conditions, restrictions and covenants of this permit. Prior to the commencement of construction, the permittee shall file with DEP in writing, on a form provided by DEP, a statement signed by the permittee and an individual responsible for the supervision or conduct of the construction work acknowledging and accepting the general and special conditions contained in this permit. Unless the acknowledgment and acceptance have been filed, this permit is void. A copy of this permit and the acknowledgment shall be available at the work site for inspection upon request by an officer or agent of DEP or another Federal, State, County, or municipal agency;
12. The permittee shall operate and maintain the structure or work authorized herein in a safe condition in accordance with the permit terms and conditions and the approved maps, plans, profiles and specifications;
13. This permit may not be transferred without prior written approval from DEP, such approval being considered upon receipt of the properly executed "Application for Transfer of Permit" form;
14. If and when the permittee desires to discontinue use or abandon the activity authorized herein, he must remove all or part of the structure or work authorized and take other actions as are necessary to protect safety and the environment in accordance with a permit issued by DEP;

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15. If the use of explosives in any waterways is required, the permittee shall secure the prior written permit from the Pennsylvania Fish and Boat Commission, pursuant to the Pennsylvania Fish and Boat Code, Act 1980-175 Title 30 Pennsylvania Consolidated Statutes, Section 2906. Requests should be directed to the Pennsylvania Fish and Boat Commission, Division of Environmental Services, 595 East Rolling Ridge Drive, Bellefonte, PA 16823-9685, telephone 814.359.5140;
16. Permittee shall implement and monitor an Erosion and Sediment Control Plan prepared in accordance with Chapter 102 so as to minimize erosion and prevent excessive sedimentation into the receiving watercourse or body of water;
17. The project site shall at all times be available for inspection by authorized officers and employees of the Pennsylvania Fish and Boat Commission. Prior to commencement and upon completion of the work authorized by this permit, the permittee shall notify the Pennsylvania Fish and Boat Commission's Southeast Regional Office, Box 8, Elm, PA 17521; telephone 717.626.0228;
18. The project site shall at all times be available for inspection by authorized officers and employees of the County Conservation District. Prior to commencement and upon completion of the work authorized by this permit, the permittee shall notify; Berks County Conservation District, PO Box 520, 1238 County Welfare Road, Leesport, PA 19533; telephone 610.372.4657;
19. **Work may not commence until a signed copy of the Acknowledgement of Appraisal of Permit Conditions is received by DEP.** Any work authorized by this permit conducted prior to DEP's receipt of a signed copy of the Acknowledgement of Appraisal of Permit Conditions is a violation of the Dam Safety and Encroachments Act and The Clean Streams Law, and you may be subject to fines and penalties pursuant to those Acts;

20. **SPECIAL CONDITIONS**

**Water Supplies:**

- a. At least 72 hours in advance of beginning any construction activities, the permittee shall notify all identified public and private water supplies identified in the "Birdsboro Pipeline Project Well and Spring Monitoring, Mitigation, and Remediation Plan" and the Pottstown Borough Water Authority. The Pottstown Borough Water Authority can be reached at 610-970-6545.
- b. If the project results in a pollution event which may impact any public or private water supplies, the permittee shall immediately notify the Department and the potentially affected public or private water supplies of the pollution event, and implement the mitigation measures specified in the "Birdsboro Pipeline Project Well and Spring Monitoring, Mitigation, and Remediation Plan".
- c. In the event the permittee's work causes adverse impacts to a public or private water supply source, the permittee shall also immediately notify the Department and address the restoration or replacement of the impacted water supply and mitigate and/or remediate any pollution resulting from the project in accordance with applicable legal requirements.

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- d. At least 72 hours in advance of beginning construction activities, the permittee shall notify all water users with downstream surface water intakes within one mile downstream, including but not limited to, drinking water users, industrial and commercial users that may be impacted by turbidity or water quality changes.
- e. The permittee shall notify such downstream water users immediately of any pollution event or incident at its site that may endanger downstream users. The permittee shall also immediately implement its approved contingency plan to prevent further adverse impacts and remediate all adverse impacts as a result of the pollution event or incident.
- f. The permittee shall notify the Pottstown Borough Water Authority immediately of any pollution event or incident that may endanger downstream users. The permittee shall also immediately implement its approved contingency plan to prevent further adverse impacts and remediate all adverse impacts as a result of the pollution event or incident. The permittee's "Birdsboro Pipeline Project Well and Spring Monitoring, Mitigation, and Remediation Plan" shall apply to the Pottstown Borough Water Authority.
- g. If a public or private drinking water source not previously identified by the permittee is discovered by the permittee during construction, the permittee shall immediately notify the Department of the identified water source and shall notify that source of the permittee's construction activities.

**Historic, Cultural or Archaeological Resources:**

- h. The permittee and its agents shall visually inspect for historic, cultural, and archaeological resources or artifacts and shall immediately cease earth disturbance activities upon discovery of historic, cultural, and archaeological resources or artifacts.
- i. If historic, cultural, and archaeological resources or artifacts are discovered, the permittee shall immediately notify the DEP Regional Office in the DEP region where the resource or artifact is found and shall concurrently notify the Pennsylvania Historical and Museum Commission (PHMC) at P.O. Box 1026, Harrisburg, PA 17120-1026, telephone 717.783.8947.
- j. At all times, the permittee shall protect historic, cultural and archaeological sites as identified in the latest published version of the Pennsylvania Inventory of Historical Places and the National Register of Historical Places.
- k. The permittee shall implement the avoidance plans provided to PHMC for the archeological sites, as approved in the January 11, 2018 letter, and any subsequent revisions and approvals, from the PHMC.
- l. The permittee shall obtain a resolution, agreement, or clearance from PHMC for the Oley Township Valley Historic District adverse effects and implement all applicable mitigation, avoidance, or other measures included in such correspondence from PHMC.

**Submerged Lands License Agreements:**

- m. The permittee shall comply with all terms and conditions of the Submerged Lands License Agreement, No. E06-717, entered into between the Department and the permittee for the Schuylkill River Crossing which is incorporated herein by reference. The SLLA dated, September 1, 2017 is attached to this permit.

**Temporary Road Crossings:**

- n. All temporary road crossings of streams and wetlands must meet all of the following conditions:
  - i. The permittee shall restore and stabilize all temporary crossing sites within five (5) days after termination of its permitted use.
  - ii. All wetlands crossing sites shall be stabilized by any appropriate means, including, but not limited to, using removable, temporary mats, pads or other similar devices to ensure minimization of impact on the wetlands ecology.
  - iii. Pollution of any waterway with harmful chemicals, fuels, oils, greases, bituminous material, acid, or other harmful or polluting materials, is prohibited.
  - iv. The permittee shall remove all or any portion of a temporary road crossing upon written notification to the permittee from the Department in the event the project is causing an adverse impact on public health, safety or the environment or in any other manner violates the requirements of the Pennsylvania Clean Streams Law, 25 Pa. Code Chapter 105, or both.
  - v. Temporary stream crossing(s) shall be constructed of suitable non-erodible material in order to prevent any road materials from washing out if structure is overtopped during periods of high water.
  - vi. Temporary road crossings shall be kept open and functioning at all times by maintaining the crossings free of debris and other obstructions.
  - vii. The permittee shall promptly repair any damage resulting from increased backwater caused by a temporary road crossing. The permittee shall remove temporary road crossings in the event of high waters to prevent increased backwater.
  - viii. Bridges shall be single span from top of bank to top of bank, and must be structurally stable.
  - ix. Approach roads to temporary road crossings shall utilize original grades. However, clean rock material or gravel to a depth of six inches above original grade can be utilized for approaches, as necessary.



**Site Field Verification, Restoration and Monitoring:**

- o. Prior to installation of pipeline crossings, the permittee shall take new pre-construction photographs of the natural resources at each of the crossings. The permittee shall prepare and maintain a record of pre- and post- conditions of each stream and wetland crossing. The permittee shall submit this documentation to the respective DEP Regional Office within ninety (90) days after completion of work under the respective permit.
- p. All wetlands within the project area shall be accurately field-delineated prior to the start of construction activities and up to the time that earth disturbance activities are completed and the site has been stabilized. An acceptable means of field-identification of wetlands includes but not limited to, the use of an orange construction safety fence and/or flags.
- q. For a period of up to 5 years following construction, the permittee shall monitor for secondary impacts to hydrology, i.e., the loss of hydrology, to all watercourses with a drainage area of less than 100 acres, including those watercourses that originate within the project ROW. Reports shall be submitted to DEP in the spring and fall for the first two (2) calendar years following construction and annually for three (3) years thereafter.
  - i. The monitoring reports shall contain information describing the presence or absence of hydrology at the time of inspection, a narrative comparison to hydrology present in the watercourse during pre-permitting field investigation(s), and photographs of the watercourse.
  - ii. If the monitoring identifies a diminution or complete loss of hydrology, the permittee shall evaluate whether the activities authorized by this permit caused the loss of hydrology and submit this evaluation to the Department for review.
  - iii. If the Department determines that the activities authorized by this permit are contributing to the loss of hydrology, the permittee shall prepare a written plan to correct the loss of hydrology to the watercourse. The permittee shall implement the approved plan within ninety (90) and submit this plan to DEP for review and approval. If DEP identifies any deficiencies with permittee's plan, then the permittee shall provide DEP a written response to address the stated deficiencies within 15 days of receiving written notice of DEP's deficiencies, unless DEP extends that timeframe in writing.
  - iv. The permittee shall implement the DEP-approved plan within 90 days of receiving written approval from DEP, unless DEP extends that timeframe in writing.
  - v. In the event that loss of hydrology from activities conducted under this permit cannot be restored, the permittee shall submit a mitigation plan to DEP that sets forth the manner in which full loss of hydrology and associated water will be compensated for. If DEP identifies any deficiencies with the permittee's mitigation plan, then the permittee shall provide DEP a

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written response to address the stated deficiencies within 15 days of receiving written notice of DEP's deficiencies, unless DEP extends that timeframe in writing. The permittee shall implement the DEP-approved mitigation plan within 90 days of receiving written approval from DEP, unless DEP extends that timeframe in writing.

- vi. Monitoring may be terminated or extended in writing by DEP based upon monitoring reports submitted.
- r. For wetland excavations, the permittee shall segregate the soil horizons and replace the soil horizons to match pre-construction conditions. For areas where bore pits are proposed in or adjacent to wetlands, or if a restrictive layer, including but not limited to clay or fragipans, is encountered during the trench excavation, the permittee shall have a knowledgeable wetlands scientist on the Environmental Inspection Team that shall oversee backfilling of the trench and installation of trench plugs, in order to maintain wetland hydrology.
- s. Topsoil shall be segregated from subsoil in all wetland areas.
- t. All disturbed areas are to be restored, stabilized and shall be replanted with indigenous plant species. Excess fill from disturbed areas and construction activities shall be located outside of the floodway, floodplain and wetlands. The permittee is responsible for stabilizing any excess materials spoiled onsite or offsite, whether the permittee owns the site or others own the site.
- u. A trench in which the pipeline will be laid shall be backfilled in a manner that does not create the formation of a permanent ridge in a streambed or wetland.
- v. Each stream channel shall be restored by using a minimum of six (6) inches of native stream bed material.
- w. Existing stream bed material will be segregated from other excavation spoils or piles for all stream crossings.
- x. All PFO and PSS wetlands within the temporary ROW or temporary workspace shall be replanted with native woody species present in the wetland prior to the permittee conducting construction activities in accordance with the "Utility Line Wetland Conversion Detail" in the Construction Details of Section H of the application materials or other native species that are known to occur within the area. The plantings need not mirror pre-construction maturity.
- y. In accordance with the "Utility Line Stream Crossing Detail" and the "Temporary Workspace Riparian Buffer Re-Vegetation Detail" in the Construction details section of Section H of the application materials, Forested Riparian Areas in the temporary and permanent ROW along watercourses shall be replanted with native tree species for a minimum distance of fifty (50) feet landward from the top of bank of streams in a similar density as the trees existed prior to the

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permittee conducting construction activities. The density of replanted trees shall be similar to the density that existed prior to the permittee conducting construction activities but shall provide no less than 60% uniform canopy cover upon maturation and shall be appropriate to the geographic location. Maintenance and inspections shall ensure survival and growth of plantings and protection from competing plants and animals including noxious weeds and invasive species over a 5-year establishment period to ensure proper functioning of riparian forest buffers.

- z. Each stream channel shall be restored and properly stabilized upon completion of the associated stream crossing. The restored streambed elevation shall not exceed the pre-existing streambed elevation.
- aa. The permittee shall avoid wetland impacts, to the extent practicable, and minimize any such impacts. The permittee shall immediately restore all disturbed wetland areas to original contours, and replant with indigenous wetland vegetation in accordance with their restoration plans as presented in their permit application. Streambank and wetland disturbances shall be minimized and stabilized with indigenous vegetation within ten (10) calendar days of final earthmoving to prevent erosion and provide cover, shading, and food source for aquatic life. Any temporary wetland crossings shall be made by low ground pressure machinery and wetland mats or similar devices. Excess fill shall not be deposited in any wetland, watercourse, floodway, floodplain, or other body of water.
- bb. For a period of up to five (5) years, the permittee shall monitor the stream and wetland plantings and wetland vegetation re-growth in the permanent ROW. Monitoring reports shall be submitted to the DEP South-central Regional Office in the spring (May 15<sup>th</sup>) and fall (November 15<sup>th</sup>) for the first two (2) calendar years following construction and annually (November 15<sup>th</sup>) for four (4) years thereafter.
  - i. The monitoring reports shall contain information describing the success of the stream and wetland restorations at the time of each inspection, an inventory of the surviving plantings, an inventory of cut vegetation species which are and are not re-growing, percent areal coverage of the hydrophytic species, photographs of sites with plans showing the location and orientation of each of the photographs, and a written plan to correct any deficiencies identified during the monitoring phase.
  - ii. Monitoring may be terminated or extended in writing by DEP based upon monitoring reports submitted.
- cc. Permittee shall ensure at least an eighty-five percent (85%) survival rate of the stream and wetland plantings and re-growth of cut vegetation in the permanent ROW. Additional plantings and or reports in subsequent years beyond the initial five (5) years may be required if an eighty-five percent (85%) survivability of planted and re-growing species is not achieved.

dd. Streambank disturbance shall be minimized and stabilized with indigenous vegetation within 24 hours upon completion of final earthmoving to prevent erosion and provide cover, shading, and food source for aquatic life.

**Wetland Compensatory Mitigation and Monitoring:**

ee. The permittee shall create the Palustrine Forested (PFO) wetlands, PFO/Palustrine Scrub Shrub(PSS) wetlands, and forested riparian buffer in accordance with the “Permittee-Responsible Compensatory Wetland Mitigation Plan for the Birdsboro Pipeline Project” (February 2018) to compensate for the conversion of 1.01 acres of PFO wetlands and 0.06 acre of PSS wetlands to Palustrine Emergent (PEM) and PSS wetlands.

ff. For at least seven (7) years after the restoration activities are completed, the permittee shall monitor the permittee-responsible compensatory wetland mitigation and riparian forest buffer site. Within sixty (60) days of completing construction, the permittee shall submit “as-built” drawings for the compensatory mitigation site to DEP. Monitoring reports shall be submitted to DEP South-central Regional Office at a frequency of every six (6) months for the first two (2) years after mitigation site construction and annually for five (5) years thereafter.

i. The monitoring reports shall contain information describing the success of the site at the time of inspection, an inventory of the surviving plant species and percent aerial coverage, photographs of each site with plans showing the location and orientation of each of the photographs, and a written plan to correct any deficiencies identified during the monitoring phase.

ii. If the permittee-responsible compensatory forested wetland and forested riparian buffer mitigation site has not achieved design objectives in accordance with the “Permittee-Responsible Compensatory Wetland Mitigation Plan for the Birdsboro Pipeline Project” (February 2018) within the monitoring period, the permittee will undertake remedial work to assure establishment of functional wetland habitats and riparian forest buffers.

gg. The permittee-responsible compensatory forested wetland and forested riparian buffer mitigation site shall be considered successful when it meets the design objectives described in the “Permittee-Responsible Compensatory Wetland Mitigation Plan for the Birdsboro Pipeline Project” (February 2018).

hh. The permittee-responsible compensatory forested wetland and forested riparian buffer mitigation construction shall commence prior to or concurrently with wetland impacts requiring compensation as authorized by this permit.

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- ii. Permittee-responsible compensatory forested wetland and forested riparian buffer mitigation site shall be completed within one (1) growing season from the commencement of the activities authorized by this permit. Within thirty (30) days of completing the planting plan, the permittee shall submit as-built plans to the DEP South-central Regional Office if as-built conditions vary from the original approved plans. If the DEP determines a significant difference exists between the approved plans and the as-built plans, then revised plans shall be submitted, and a permit amendment may be required.
- jj. The permittee shall provide copies of the recorded deed restrictions or conservation easements for the permittee-responsible compensatory forested wetland and forested riparian buffer mitigation site within (60) days after permit issuance. Time-stamped copies of the instrument(s) shall be sent to the DEP South-central Regional Office.

**Horizontal Directional Drilling:**

- kk. Fifteen days before Horizontal Directional Drilling (HDD) operations start at an HDD location, the permittee will notify all landowners within 450 feet of HDD alignments, (by US Postal Service Certified Mail and First Class Mail) and offer such landowners the opportunity to have their water supplies within 450 feet of the HDD alignment sampled before, during and after the HDD operation in accordance with the parameters in the “Birdsboro Pipeline Project Well and Spring Monitoring, Mitigation, and Remediation Plan”.
- ll. The permittee shall construct and operate the HDD crossings at wetlands, streams and floodways in a manner to prevent a release of drilling fluid to “waters of this Commonwealth,” as that term is defined in the Clean Streams Law, 35 P.S. §691.1. The permittee shall immediately notify the Department at 866-825-0208 in the event of an Inadvertent Return, and immediately activate and implement the “Inadvertent Return Contingency Plan – Birdsboro Pipeline”, “Birdsboro Pipeline Project Well and Spring Monitoring, Mitigation, and Remediation Plan” and the “Karst Mitigation Plan for: Birdsboro Pipeline” to prevent any impacts to waters of the Commonwealth and other natural resources.
- mm. The permittee shall take all measures necessary to avoid drilling activities in the vicinity of mine voids and utilities.
- nn. The permittee shall visually monitor the ground surface and within waters of the Commonwealth generally along the path of the HDD while drilling operations are occurring. This monitoring shall include walking, wading and use of a boat, as necessary to effectively observe and monitor for any return to the surface of materials associated with waters of the commonwealth. If loss of circulation of drilling fluid occurs or drilling fluid pressure is lost, the permittee shall immediately investigate the drilling pathway and general surrounding area for an inadvertent return. If an inadvertent return is discovered, then drilling shall immediately cease.

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- i. If an inadvertent return occurs, HDD can only resume after a Registered Professional Geologist or Registered Professional Engineer inspects and evaluates the site for the likelihood of another inadvertent return. Drilling will only be allowed to continue following consultation with and written approval from the DEP.
- oo. Inadvertent returns that impact or discharge to streams, floodways or wetlands during HDD operations shall be remediated in compliance with the Inadvertent Return Contingency Plans. If clean-up operations differ from the submitted plans, prior approval from DEP will be necessary for any modifications to the Inadvertent Return Contingency Plan for additional mitigation.
- pp. HDD additives which are certified for conformance with ANSI/NSF Standard 60 (Drinking Water Treatment Chemicals - Health Effects) are deemed acceptable to DEP, when used in the manner indicated in the certification of the additive. All conditions included as part of the additive's certification must be followed. A current listing of certified drilling fluids is maintained by NSF at <http://www.nsf.org/Certified/PwsChemicals/Listings.asp?ProductFunction=Drilling+Fluid&>. Use of drilling additives certified for conformance with ANSI/NSF Standard 60 does not relieve operators from the requirement to obtain the necessary permits to conduct HDD operations. Use of certified additives does not relieve the operator of liability should an inadvertent return or other pollution of the waters of the Commonwealth occur as a result of drilling operations.

**Habitat Conservation Plans and Threatened and Endangered Species Protection:**

- qq. The permittee shall implement the Avoidance Measures for the Schuylkill River outlined in the DCNR Mitigation Actions plan dated October 30, 2017.
- rr. The permittee shall comply with all applicable provisions of the Project Coordination Reports submitted to and approved by the jurisdictional resource agencies, including Pennsylvania Game Commission (PGC), the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Fish and Boat Commission (PFBC), and the U.S. Fish and Wildlife Service (USFWS), to protect federal and state listed species.
- ss. The permittee shall implement all Avoidance Measures identified by each jurisdictional resource agency, including Pennsylvania Game Commission (PGC), the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Fish and Boat Commission (PFBC), and the U.S. Fish and Wildlife Service (USFWS), for any threatened or endangered species or species of special concern for both pipeline construction and permittee-responsible compensatory mitigation construction.
- tt. Prior to conducting any future maintenance activities on the pipeline or right of way which involve disturbance, the Permittee shall conduct a then-current Pennsylvania Natural Diversity Inventory search, shall obtain clearance(s) for any species or resource where a potential impact is

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identified, provide the avoidance and mitigation plan to the Department prior to initiating such maintenance work and shall implement and adhere to all avoidance measures outlined in such clearance(s).

**Seasonal Restrictions:**

- uu. The permittee shall not perform any in-stream work in Unnamed Tributaries to Manatawny Creek or Unnamed Tributaries to Little Manatawny Creek between October 1 and December 31 without the prior written approval of the Pennsylvania Fish and Boat Commission's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.
- vv. Other seasonal restrictions stated in the various Project Coordination Reports submitted to the jurisdictional resource agencies shall be complied with unless a written variance is issued by the appropriate resource agency.

**Miscellaneous:**

- ww. Herbicide spraying of wetlands is not authorized by this Permit. Additionally, with the exception of a 10-foot wide area centered over the pipeline, maintenance mowing of wetlands is not authorized by this Permit. The permittee shall place and maintain signs or other demarcation around the boundary of each wetland to clearly delineate the areas where this maintenance is not authorized. The permittee shall place the signs or other demarcations when all restoration work is completed and prior to permit termination.
- xx. Riprap and stone used throughout the project, including the construction of causeways and coffer dams, shall be free of fines and silts, or other non-erodible material.
- yy. Trench plugs shall be placed at each of the following locations:
  - i. At ten (10) feet from the top of each bank of a stream
  - ii. At fifty (50) feet from the top of each bank of a stream
  - iii. At ten (10) feet from the edge of a wetland
  - iv. At fifty (50) feet from the edge of a wetland
- zz. Place trench plugs within wetlands according to the approved plans, at a minimum of one (1) trench plug at a maximum spacing of 100 feet between trench plugs within a wetland. Wetland crossings less than fifty (50) feet do not require an internal trench plug.

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- aaa. If during excavation, a groundwater seep is encountered, a trench plug shall be placed at ten (10) feet from each side of the seep.
- bbb. Any french drains installed as part of de-watering for construction activities shall be removed or otherwise rendered inoperable prior to final site restoration.
- ccc. Water pumped from any construction area shall be diverted into an approved E&S BMP to prevent sediment from being discharged into any waters of the Commonwealth.
- ddd. Open Trench Crossings: The permittee shall construct open trench pipeline crossings in dry conditions by constructing during periods of no water flow and/or by installing stream flow bypass systems (flumed or pumped) through the affected area.
  - i. Each crossing shall be conducted in an uninterrupted process in the shortest period of time possible. Impacts to waters of the Commonwealth shall be avoided, to the extent practicable, and if not practicable, then minimized in accordance with the permittee's approved plans.
  - ii. The permittee may cross dry channels, swales and ephemeral streams without the use of stream flow bypass systems if the channel has no flow and the stream crossing and stabilization can be completed in dry conditions and within twenty-four (24) hours. Standby sandbag dams and pumps shall be located on-site and installed in the event of precipitation resulting in channel flow.
- eee. The permittee shall cross intermittent and perennial streams through the use of trenchless methods (HDD or Dry Conventional Bore) or through the use of stream flow bypass systems. Bypass systems must stay in use until streambeds and banks are adequately stabilized. Downstream flow must be maintained during the construction.
- fff. Aids to Navigation Plan: The permittee shall implement the approved Aids to Navigation (ATON) Plan as received under the Fish and Boat Code, 30 Pa C.S. §§5121-5124, and 58 Pa Code Chapter 113.
- ggg. This permit authorizes specific impacts to waters of the Commonwealth that were specifically described in the permit application and revisions. Any proposed changes regarding the specific impacts will require a permit modification.
- hhh. Any additional impacts to waters of the Commonwealth, such as temporary access roads, lay-down areas, staging areas, or temporary work spaces that have not been specifically identified in the permit application are not authorized by this permit.



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- iii. No deviation in the construction methodology or project design that is shown on the approved drawings is authorized under this Permit unless approved by the Department in writing.
- jjj. This permit does not relieve the permittee of the obligation of complying with all Federal, interstate compact, State laws, regulations and standards, and local ordinances applicable to the construction, operation or maintenance of the water obstruction or encroachment.
- kkk. The permittee shall follow the measures specified in the Preparedness, Prevention, and Contingency Plan and Inadvertent Return Contingency Plan, Well and Spring Monitoring, Mitigation and Remediation Plan, and the Karst Mitigation Plan during construction.
- lll. The permittee shall maintain a copy of the Preparedness, Prevention, and Contingency Plan and Inadvertent Return Contingency Plan, Well and Spring Monitoring, Mitigation and Remediation Plan, and the Karst Mitigation Plan on-site at all times during construction, train all staff to use and implement this plan, and have this plan available to provide at the request of any Department inspector.
- mmm. All synthetic erosion control features (e.g. silt fencing, netting, mats), which are intended for temporary use during construction, will be completely removed and properly disposed of in a timely manner. Only natural fiber materials which will degrade over time will be used as permanent erosion control measures, or if used temporarily, may be abandoned in place.
- nnn. If toxic, hazardous, or other polluting materials will be on site, the permittee or co-permittee(s) must develop a PPC Plan for use while those materials are on site in accordance with 25 Pa. Code § 91.34 (relating to activities utilizing pollutants). The PPC Plan shall identify areas which may include, but are not limited to, waste management areas, raw material storage areas, fuel storage areas, temporary and permanent spoils storage areas, maintenance areas, and any other areas that may have the potential to cause noncompliance with the terms and conditions of this permit due to the storage, handling, or disposal of any toxic or hazardous substances such as oil, gasoline, pesticides, herbicides, solvents, concrete wash waters, etc. BMPs shall be developed and implemented for each identified area. The PPC Plan shall be maintained on site at all times and shall be made available for review at the Department's or authorized conservation district's request.
- ooo. All building materials and wastes must be removed from the site and recycled or disposed in accordance with the Department's Solid Waste Management Regulations at 25 Pa. Code Ch. 260a (relating to hazardous waste management system: general), Ch. 271 (related to municipal waste management system – general provisions), and Ch.287 (relating to residual waste management system – general provisions). No building material or wastes or unused building materials shall be burned, buried, dumped, or discharged at the site.

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ppp. The permittee shall fully implement and follow the “Construction Monitoring and Waste Management Addendum; Birdsboro Pipeline – Armorcast Site; Burdsboro, Berks County, PA; February 1, 2018” and the “Limited Geoprobe Investigation Report; HDD Pit and Pipeline; Former Armorcast Site” during construction. If a release of contamination occurs during construction, the permittee shall immediately notify the Department Couth-central Regional Office and the Departments 24-hour Emergency Response hotline 1-866-825-0208.

qqq. This permit is not to be considered an approval of the structural analysis, the engineering specifications or the construction methods utilized during construction of this activity.

**DEPARTMENT OF ENVIRONMENTAL PROTECTION**



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Scott R. Williamson  
Program Manager



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Issue Date