

ENVIRONMENTAL REVIEW FOR CHAPTER 105 APPLICATIONS

Permittee: Sunoco Pipeline L.P.

App. No.: E06-701

Environmental Recommendation*:

- Approval
- Denial
- Withdrawal
- Concur
- Not Concur

Reviewer: Jonathan Chripczuk 

Date: 12/21/16 - 2/9/17

Super. Initials: 

Date: 2/10/17

Special Conditions: see attached

I. Record of Decision

Has any portion of the regulated work already occurred? () Yes (x) No

Initial Proposed Acreage to be Impacted (see application) (ac.)

Final Wetland Area Impacted: (2.151) (ac.) Permanent; (0.03) (ac.) Temporary

Wetland Area Replaced NA (ac.) (no loss in wetland acreage or conversion in Berks County)

Length of Channel Impacted: (2,829 linear ft permanent; 101 linear feet temporary)

Length of Channel Replaced (0.0 ft)

Area of Open Water Impacted (0.016) (ac.) Area of Open Water Replaced (0.0) (ac)

A. Review of Application - Notes (Identify plan used to determine regulated structures and activities, and list each regulated activity. Be sure to identify any waiver or general permit, if applicable.)

The applicant seeks a Water Obstruction and Encroachment permit to conduct activities described in the attached impact tables. Note that permanent stream channel impacts in the tables differ from the impact numbers listed above and in the permit description because the tables only provide square footage of HDD stream impacts and the numbers listed above and in the permit description have included linear footage of impacts.

While some of the impacts may be eligible for a General Permit #5, a standard Water Obstruction and Encroachment Permit is required because the applicant proposes to cross exceptional value resources and a General Permit #5 does not apply in these areas. The applicant has proposed, and special conditions will be added, that following construction, the stream beds, banks, swales and riparian zones will be restored to their original contours, stabilized and planted with suitable indigenous species.

Comprehensive Environmental Evaluation: The applicant submitted a cumulative environmental evaluation (CEE). Lead review and approval of the CEE was conducted by DEP southeast regional office. Their comments are as follows:

On December 5, 2016, SPLP submitted a Comprehensive Environmental Assessment (CPA) for Ch. 105 Water Obstruction and Encroachment Permit Activities. The purpose of the CPA is to ensure that the regulatory requirements related to the Environmental Assessment in Ch. 105 are met by permit applicants proposing project impacts to waters of the Commonwealth. Specifically, the following items were to be addressed:

1.Measures taken to avoid and minimize the overall project's impact on waters of the Commonwealth, to the maximum extent practicable. The submittal addresses this item and references application materials that apply to each requirement pursuant to 105.18a and associated referenced regulations including 105.13(e)(1)(vii-x), (2),(3), (g) and (j); and 105.15.

2.Specific measures taken to mitigate for impacts that could not be avoided or minimized. The submittal addresses this item and references application materials that apply to each requirement pursuant to 105.18a and associated referenced regulations including 105.14.

3.Overall consistency with Antidegradation. The submittal addresses consistency with State Antidegradation requirements contained in Chapters 93, 95, 102 and 105.

4.Address alternatives analysis, impacts analysis and mitigation measures in each County-specific application. This item is addressed within the corresponding section of the Record of Decision for each county specific Ch. 105 Joint Permit Application.

5.Assess the cumulative impact of the project and other existing and potential projects on each wetland resource. The applicant must utilize due diligence when identifying these impacts. This item is addressed within the corresponding section of the Record of Decision for each county specific Ch. 105 Joint Permit Application.

PNDI: The applicant coordinated with each resource agency to check for the presence of threatened or endangered species. Numerous potential impacts were identified. The applicant coordinated locations and habitat conservation plans with each resource agency to obtain a final clearance letter for T&E species. The permit will be special conditioned that all habitat conservation plans and conditions associated with agency clearance letters be followed.

Alternatives Analysis: The alternatives analysis included avoidance and minimization measures to reduce the level of impacts. These measures included crossing wetlands and streams by trenchless methods (HDD and Directional Boring) where feasible (see the Trenchless Feasibility Assessment). The applicant's analysis also discusses overall efforts to avoid and minimize impacts to Regulated Waters of the Commonwealth including 4 major route alternatives, 12 minor realignments, and an evaluation of crossing method. The analysis also showed preferred localized or smaller segment route alternatives. Additionally, according to SPLP, co-location is a main effort employed to avoid and minimize impacts to regulated Waters of the Commonwealth. This information was sufficient for the project-wide Alternatives Analysis overall, yet there were outstanding questions on localized alternatives that could further avoid and minimize impacts to Regulated Waters of the Commonwealth. The analysis also showed preferred localized or smaller segment route alternatives. Additional information was provided on February 7, 2017 in the Response to DEP 01-27-17 Comments No 4 and 5. When raised to program management, direction was provided that for a project of this scale, looking at the broader scope of the project and the process SPLP moved through to avoid and minimize impacts rather than focusing on localized alternative routes is sufficient.

Crossing Method: Within Berks County, several crossings will be made by horizontal directional drilling (HDD) and or by utilizing Direct Bore (DB), and are likely to result in little to no impact to the stream. Special conditions will be added to the permit as safeguards to HDD operations and potential inadvertent returns. Special condition will also be added to the permit for direct bore pit restoration. The remaining crossings will be made by open-cut method in a dry channel and/or utilizing a flume or pump-bypass system so that the work will be conducted in dry conditions per the provided plans and E&S BMP manual. The applicant has proposed, and special conditions will be added, that following construction, the stream beds, banks, swales and riparian zones will be restored to their original contours, stabilized and planted with suitable indigenous species. Forested riparian areas in the Temporary ROW will be planted with native tree species in accordance with requirements of the special condition for all streams.

Anti-Degradation: SPLP provided an anti-degradation analysis to demonstrate compliance. As an antidegradation measure, SPLP proposes to institute Antidegradation

Best Available Combination of Technologies (ABACT) measures or BMPs for regulated activities under Chapter 105, including to EV wetlands, through implementing their Erosion and Sediment Control Plan (ESCP), HDD Inadvertent Return Contingency Plan (IRCP), Prevention and Control Plans (PPC), Water Supply and Karst PPC Plans. SPLP must restore impacted watercourses and wetlands to original contours and not alter the wetland's functions and values. Additionally, SPLP must implement Compensatory Wetlands Mitigation. Special conditions are attached to the permit to ensure these plans are followed.

Parks/Natural Areas: Within Berks County, the line will cross under the local hiking trails, parks, and National Heritage Areas (NHA). These areas are identified and accounted for in the Environmental Assessment, enclosures C & D. Impacts are temporary to hiking trails and the trails will be restored. Parks and NHAs are proposed to be collocated with existing ROW and minimal impact is anticipated. All areas will be restored per the standard restoration details, including wetlands, streams and riparian areas.

PA Fish and Boat Commission Comments: The PA Fish & Boat Commission's Division of Environmental Services has recommended that the project be approved. On 10/8/2015 their office provided comments found on the attached sheet. DEP agrees with the comments and time of year restrictions. Special condition will be added to the permit for time of year restriction unless a waiver is received from Fish and Boat Commission.

Aids-to-Navigation: The applicant has provided an Aids-To-Navigation (ATON) plan for impacts to streams that are potentially navigable, as deemed by the PA Fish and Boat Commission. A special condition will be included to require approval of the ATON from the PA Fish and Boat Commission.

Public Water Supply: The applicant identified public water supplies that could be impacted by the construction of this project. The initial search was not conducted properly. SPLP conducted the search again and identified additional water supply areas. Materials downloaded on February 7, 2017, indicated that no new EV wetlands were identified due to additional water supply areas identified. Their conclusions were not

verified but accepted. According to the application, SPLP has assessed and minimized the risk of an IR occurrence at HDD sites. Potential impacts to water supplies from this project will be mitigated by the implementation of the PPC plan. Special conditions added to the permit for added protection. Much of the issues with water supplies were looked in to by the Dam Safety, Waterways and Wetlands Section Chief.

PHMC: PA Historical & Museum Commission (PHMC) approval has not yet been provided for the project. Bureau and legal analysis revealed that PHMC approval is not required to approve the project. Three (3) special conditions drafted by program management pertaining to historical and archaeological resources are attached to the permit to address PHMC issues.

Compliance: It is understood that SPLP is not in compliance with the Department's Chapter 102 regulations in at least the Southcentral Region and Southwest Region of DEP regarding other projects. However, the details of these compliance issues are not known by this reviewer. The decision of whether a permit can be issued in regards to ongoing compliance has been elevated to Program and Bureau management.

The application was forwarded to the U.S. Army Corps of Engineers as reporting on 8/28/2015 for separate review and approval.

The project description was placed in Volume 46, Number 26 of the PA Bulletin on June 15, 2016 and has since expired. Numerous comments were received. The comment response document was prepared by DEP's Central Office with assistance from the Bureau and Program Management. On a case by case basis, individual reviewers were also consulted by Program Management during the preparation of the response. See the comment response document for more information on DEP's position regarding the comments.

Numerous deficiencies were identified during the review of the application. The DEP has made a determination at the Bureau level that while the deficiencies and potential deficiencies identified are valid and inconsistencies throughout the application exist, the sloppiness is on the applicant's part. A narrowed list of deficiencies was provided to

SPLP on February 1, 2017. Remaining deficiencies were discussed at a meeting with the Bureau on February 3, 2017. The Bureau explained that minimum standards have been met and many remaining identified deficiencies are not required to be addressed for permit issuance. Therefore, at the direction of the Bureau, special conditions have been drafted to address the outstanding items, including some of those provided to SPLP for prior to the February 2, 2017 meeting.

*Based on the application submitted, attached review, and direction provided by DEP bureau and legal staff, an individual Chapter 105 Water Obstruction and Encroachment Permit with Water Quality Certification pursuant to Section 401 of the Federal Water Pollution Control Act can be approved with conditions.

Additional sheets attached.

	<u>YES</u>	<u>NO</u>
B. <u>Potential Project Impacts</u>		
1. Potential Threats to Life or Property	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Potential Threats to Safe Navigation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Riparian Rights Above, Below or Adjacent to Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Regimen and Ecology of		
a. Watercourse	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Body of Water	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. National/State Natural Areas, Wildlife Sanctuary/Refuge	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. National/State/Local Park or Recreation Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. National/State/Local Cultural, Archaeological, or Historical Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Public Water Supply	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Non-compliance with Applicable laws	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Non-water Dependent Project	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Future Development Potential	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. State Water Plan Program Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Coastal Zone Management Program Area	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14. Scenic River Corridor Status: <u>none</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. Chapter 93 Classification: <u>WWF, TSF, CWF, HQ, EV, MF</u>	<input type="checkbox"/>	<input type="checkbox"/>
a. Exceptional Value Watershed	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- b. High Quality Watershed
- c. Antidegradation Consistency
- 16. Secondary Impacts
- 17. Cumulative Impacts (temporary and permanent impacts)
- 18. Wetlands
 - a. Vegetation: NWI Designation - various
 - b. Soils: NRCS Designation - various
 - c. Hydrology: various
- 19. Exceptional Value Wetlands
- 20. Stocked Trout Stream
- 21. Wild Trout Stream
- 22. Threatened or Endangered Species
- 23. Other Species of Special Concern

YES NO

C. Record of Decision for Project Impacts (Any adverse findings must be documented in the Record of Decision.)

1. **Exceptional Value Wetlands** - (check the criteria that makes the wetland EV):

- natural or wild areas wild or scenic river wild trout stream
- public or private water supply EV waters threatened or endangered species habitat
- threatened or endangered species (results of PNDI search)

a. Describe the primary function(s) or value(s) of the wetland: See applicant's Environmental Assessment for functional assessment of each EV wetland.

b. Will the project have an adverse impact on the wetlands functions or values?

Explain: Crossings are temporary in impact (with permanent operations and maintenance). The applicant states, and special condition will be added, that wetlands are restored to pre-construction conditions. No PFO conversion is proposed in Berks County. PSS impacted areas will be restored with shrub plantings at 400 stem/acre density. A special condition will be added to ensure adequate survival of plantings.

Wetland AM2 is an occupied bog turtle wetland. The applicant proposes to open trench the wetland for pipeline installation. Fish and Wildlife Service has provided conditional clearance for the crossing. The applicant has stated that confining layers will be restored at the direction of a licensed Professional Geologist to ensure that no adverse impacts occur. Per direction from the regional Program Manager, the permit will be special conditioned so that wetlands that serve as habitat for T&E species will be monitored to ensure that the habitat function of that wetland is adequately restored.

If Yes, has applicant affirmatively demonstrated that project is necessary to abate a substantial threat to the public health and safety?

Has applicant demonstrated that requirements of Section 105.18a(b)(2)-(7) are met?

- c. Is project water-dependent? (A project is water dependent when the project requires access or proximity to or siting within the wetland or waters to fulfill the basic purpose of the project.)

Explain: The applicant states in a statement on water dependency within the alternatives analysis: "...because of Pennsylvania's abundant water and wetland resources, any project which travels approximately 300 miles east-west across the Commonwealth requires the crossing of, and therefore access to, waters and wetlands. The Project requires access and proximity to and siting in, on, over or under waters and wetlands in order to achieve its primary purpose to transport natural gas liquids from Houston, Washington County to SPLP's existing facility in Marcus Hook, Delaware County. Therefore, the linear nature and approximately 300 mile length of the Project across 17 counties east-west in Pennsylvania makes the Project water-dependent." The applicant further states: "SPLP has avoided and minimized potential impacts to waters and wetlands from the Project. In so doing, the analysis set forth herein concludes that there is no practicable alternative to each of the crossings to waters and wetlands that would have less effect on each water or wetland, and not have other significant adverse effects on the environment, taking into consideration construction costs, existing technology and logistics." The Bureau has determined that the

alternatives analysis is sufficient. Therefore, according to the applicant, the project requires access to/proximity to/siting in water resources and no practicable alternatives exist and is therefore water dependent.

- d. Is project the least environmentally damaging alternative?

List alternatives considered and provide rationale that the least damaging alternative has been selected.

The applicant largely sought to collocate the lines with other SPLP gaslines or, if necessary, other utility ROWs. This is based on the Governor's pipeline taskforce. The applicant has provided an alternatives analysis. The analysis consists primarily of "shortest route deviations" that could potentially avoid impacts. While it appeared that some alternatives exist, the applicant states that such alternatives are not feasible due to cost, logistics, and the other "greenfield" necessary for route deviations (also as recommended by the Governor's pipeline taskforce). The Bureau has determined that the alternatives analysis adequately demonstrates that other potential alternatives are not practicable.

- e. Will project violate a State water quality standard? YES NO

Explain: Temporary impacts, revegetating ROW, implementing approved E&S plan and PPC plan.

- f. Will project contribute to the pollution of groundwater or surface water or diminution of resources sufficient to interfere with their uses?

Explain: Temporary impacts, revegetating ROW, implementing approved E&S plan and PPC plan

- g. Will the cumulative effect of this project and other projects result in impairment to exceptional value wetland resources?

Explain: Based on the submission, review and special conditions, adverse impacts are not anticipated. Therefore, this project should not contribute to a cumulative impairment to wetland resources.

- h. Explain how wetlands have been replaced in accordance with 105.20a and list which compensatory replacement method was used.

Explain and List: The project cumulatively does not result in the loss of wetland area and results in 0.4 acre of PFO to PEM conversion. However, no PFO conversion is proposed in Berks County.

2. Other Wetlands

- a. Describe the primary function(s) or value(s) of the wetland: The primary functions of “other” wetlands are provided within the applicant’s Environmental Assessment

Explain: ()

- b. Will the project have an adverse impact on the wetland's functions or values?

Explain: Pipeline installation is a temporary impact (with permanent operations and maintenance). The applicant has committed to posting “no mow” signs and to allow the wetlands to remain undisturbed. No vegetative conversion is proposed in Berks County. Wetland functions and values are expected to remain the same.

- c. Will the project have a significant adverse impact on the wetland’s functions or values?

Explain: ()

If Yes, has applicant affirmatively demonstrated that project is necessary to abate a substantial threat to the public health and safety?

- d. Have adverse impacts been avoided or reduced to maximum extent possible?

Explain: Many wetlands avoided. Several EV or larger wetland complexes are installed by trenchless technology, both HDD and conventional bore. Impacts associated with open trench are reduced by: eliminating construction ROW and only working in Permanent ROW, topsoil restoration, use of wooden pads to limit compaction, monitoring to ensure restoration, and PSS planting where encountered.

YES NO

- e. Is project the least environmentally damaging alternative?

List alternatives considered and provide rationale that the least damaging alternative has been selected.

The applicant largely sought to collocate the lines with other SPLP gaslines or, if necessary, other utility ROWs. This is based on the Governor's pipeline taskforce. The applicant has provided an alternatives analysis. The analysis consists primarily of "shortest route deviations" that could potentially avoid impacts. While it appeared that some alternatives exist, the applicant states that such alternatives are not feasible due to cost, logistics, and the other "greenfield" necessary for route deviations (also as recommended by the Governor's pipeline taskforce). The Bureau has determined that the alternatives analysis adequately demonstrates that other potential alternatives are not practicable

- f. Will project violate a State water quality standard?

Explain: Temporary impacts, revegetating ROW, implementing approved E&S plan and PPC plan

- g. Will project contribute to the pollution of groundwater or surface water or diminution of resources sufficient to interfere with their uses?

Explain: Temporary impacts, revegetating ROW, implementing approved E&S plan and PPC plan

- h. Will the cumulative effect of this project and other projects result in impairment to wetland resources?

Explain: Based on the submission, review and special conditions, adverse impacts are not anticipated. Therefore, this project should not contribute to a cumulative impairment to wetland resources.

- i. Explain how wetlands have been replaced in accordance with 105.20a and list which compensatory replacement method was used.

Explain and List: The project cumulatively does not result in the loss of wetland area and results in 0.4 acre of PFO to PEM conversion. However, no PFO/PSS conversion is proposed in Berks County

3. Watercourses (check all that apply)

of the proposed project outweigh the harm to the environment?

Public benefits include:

1. Correction and prevention of pollution.
2. Protection of public health and safety.
3. Reduction of flood damages.
4. Development of energy resources.
5. Creation or preservation of significant employment.
6. Provision of public utility services.
7. Other essential social and economic development which benefits a substantial portion of the public.

Explain: Items 4, 6 and 7 are relevant.

f. Is the project located in or within 100 feet of a watercourse or body of water that has been designated as a National or State wild or scenic river?

g. Is the project located in or within 100 feet of a Federal wilderness area?

h. Is the project located within an area which serves as a habitat of a threatened or endangered species?

i. Is the project located in waters classified as exceptional value in Chapter 93?

YES **NO**

j. If yes to any "f" thru "i", has the applicant demonstrated that the project will not have an adverse impact upon the public natural resource?

EV Streams will be restored with natural streambanks and streambed. Trees will be replaced within the temporary ROW 150 feet landward of the EV stream crossings.

D. Sources Utilized for Review

1. Quad Sheet:
2. National Wetlands Inventory Map
3. Special Protection Watersheds Map
4. Scenic Rivers Candidates Map
5. Coastal Zone Management Map
6. County Soil Survey

- 7. P.N.D.I.
- 8. State Water Plan
- 9. Other Agencies' Reviews (See E)
- 10. Environmental Review Committee (See F)
- 11. Other: ()
- 12. Site Inspection:
- 13. Jurisdictional Determination from ACOE
- 14. Applicants Environmental Assessment

<u>Recommendations</u>			
	*Approve	No	
<u>Approve</u>	<u>w/Conditions</u>	<u>**Deny</u>	<u>Comments</u>

E. Other Agencies' Comments

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Pennsylvania Fish & Boat Commission | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Pennsylvania Game Commission | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Pennsylvania Historical & Museum Commission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. U.S. Fish & Wildlife Service | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. U.S. Army Corps of Engineers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 6. National Marine Fisheries | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Environmental Protection Agency | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. County Conservation District | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9. Other: () | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

* Provide explanation of how agency comments were addressed, and attach letters, memos, etc.:

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** If "Deny" is checked, provide response to agency recommendation:

()

F. Environmental Review Committee Comments

Date Presented ()

()

Minutes attached

Do minutes accurately reflect discussion?

Yes

No

G. Attach Meeting Minutes if available or provide a Summary of Preapplication Meeting - Include dates and attendees

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SPECIAL CONDITIONS

Application No: **E06-701**

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 along the project's corridor that may be affected by increased turbidity or other water quality changes caused by the permittee's construction activities.
 - i. 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.
- b. 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 implement a contingency plan, to the satisfaction of the public and private water supply owners that addresses all adverse impacts imposed on the public and private water supply as a result of the pollution event, including the restoration or replacement of the impacted water supply.
- c. 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.
- d. 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.
- e. 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.

PHMC General Conditions:

- f. The permittee and its agents shall visually inspect for archaeological artifacts and shall immediately cease earth disturbance activities upon discovery of archaeological artifacts.
- g. If archaeological artifacts are discovered, the permittee shall immediately notify the DEP Regional Office in the DEP region where the 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.

- h. 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.

PHMC Areas Subject to Phase I or Phase II Surveys:

- i. The permittee shall not begin work in areas subject to Phase I or Phase II archeological investigations recommended by the PHMC until the permittee secures the necessary clearances for these areas from PHMC. (Permit specific condition as applicable. Specify location in each permit).

Submerged Lands License Agreements:

- j. The permittee shall comply with all terms and conditions of the Submerged Lands License Agreement entered into between the Department and the permittee for the (identification of crossing), which is incorporated herein by reference. (This condition is permit-specific. Add when applicable and attach finalized SLLA to permit).

Temporary Road Crossings:

- k. 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, except fords, within five (5) days after termination of its permitted use.
 - ii. Permittee shall not utilize or construct fords on any stream or watercourse within High Quality (HQ) and Exceptional Value (EV) watersheds as specified in 25 Pa. Code Chapter 93, or in watersheds tributary to drinking water intakes or reservoirs for public water supply users, where the ford is within 2,000 feet upstream of such intake or reservoir.
 - iii. The permittee shall adequately block and stabilize all approaches for fords used as temporary crossings within five (5) days after termination of their permitted use in order to prevent future use.
 - iv. The permittee is prohibited from skidding across fords.
 - v. Where a streambed at the site of a ford does not have a rock bottom, a layer of clean rock over geo-fabric must be placed and maintained. This layer of clean rock must not obstruct the stream flow. In addition, the ford's approaches must: (1) be maintained in a firm and stable condition; and (2) enter the stream on less than a 10% grade within 50 feet of the stream with the flow; and (3) exit the stream against the flow on the same grade and distance limitation as specified for the entrance. Permittee shall ensure that all roads cross all watercourses at a

right angle to the stream, unless permittee obtains specific and separate approval from the Department.

- vi. Permittee shall ensure that all culverts provide a waterway area sufficient to adequately discharge the normal flow of the watercourse or stream, and that culverts are of sufficient length to extend beyond the toe of the clean rock fill.
- vii. Permittee shall ensure that culverts are installed in such manner that overtopping of the roadway will occur within the stream channel. This can be accomplished by providing a depressed roadway embankment.
- viii. Permittee shall minimize excessive fill and excavation of stream banks by utilizing culverts with as large a diameter as possible. The minimum diameter size of a culvert to be used is no less than 12 inches.
- ix. Road and causeway embankments shall only consist of clean rock material to prevent stream channel sedimentation during placement, removal, and periods of overtopping.
- x. Bridges shall be single span from top of bank to top of bank, and must be structurally stable.
- xi. 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.
- xii. Causeways shall not extend streamward a distance greater than one-half the width of the stream channel.
- xiii. Temporary road crossings shall be kept open and functioning at all times by maintaining the crossings free of debris and other obstructions.
- xiv. 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.
- xv. If permittee cannot avoid a wetland crossing, the crossing is permissible if it is located at the narrowest practicable point of the wetland.
- xvi. 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.
- xvii. Temporary embankments for roads across wetlands shall be installed to maintain the hydrology of the wetland.
- xviii. Pollution of any waterway with harmful chemicals, fuels, oils, greases, bituminous material, acid, or other harmful or polluting materials, is prohibited.

- xix. Access roads should not approach the stream channel directly downslope, but should traverse the slope obliquely to prevent high velocity road drainage flows from directly entering the stream channel. Road drainage shall include proper erosion and sediment control Best Management Practices.
- xx. 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.
- xxi. The permittee shall be responsible for determining and documenting which method of crossing is appropriate for each resource. This documentation shall be provided to the Department with the pre- and post-construction photographs. The permittee shall submit this documentation to the respective DEP Regional Office within ninety (90) days after completion of work under the respective permit.

Site Field Verification, Restoration and Monitoring:

- l. 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.
- m. 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.
- n. 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 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.
- o. Wetland excavation 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.
- p. Topsoil shall be segregated from subsoil in all wetland areas.
- q. 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.
- r. Rock riprap shall be used in the stream bed only where a shear stress analysis has determined that scour protection is necessary to ensure stability of the resource.
- s. 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.
- t. Restored streams shall use a minimum of six (6) inches of native stream bed material. For streams where riprap is necessary to prevent scour, the riprap shall be depressed sufficiently to allow six (6) inches of native stream bed material over the riprap.
- u. All PFO and PSS wetlands within the temporary ROW shall be replanted with woody species present in the wetland prior to the permittee conducting construction activities. The plantings need not mirror pre-construction maturity.

- v. Forested Riparian Areas in the temporary ROW along watercourses shall be replanted with native tree species for a minimum distance of fifty (50) feet landward from the top of both banks of warm water fisheries and trout stocked fisheries, 100 feet from cold water fisheries, and 150 feet from HQ/EV streams, in a similar density as the trees existed prior to the 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 and proper functioning of riparian forest buffers, and shall include measures to repair damage to the buffer from storm events greater than the 2-year/24-hour storm.
- w. Each stream channel shall be restored and properly stabilized upon completion of the associated stream crossing. Where riprap is proposed, the riprap shall be depressed and covered with a minimum of 6-inches of streambed material. The restored streambed elevation shall not exceed the pre-existing streambed elevation.
- x. 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.
- y. For a period of up to five years, the permittee shall monitor the stream and wetland plantings. Monitoring reports shall be submitted to the respective DEP Regional Office in the spring (May15) and fall (November 15) for the first two (2) calendar years following construction and annually (November 15) for four (4) years thereafter.
 - i. The monitoring reports shall contain information describing the success of the site at the time of each inspection, an inventory of the surviving plant species and percent areal coverage, photographs of the replacement 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.
- z. Permittee shall ensure at least an 85 percent survival rate. Additional plantings and or reports in subsequent years beyond the initial five (5) years may be required if an 85 percent survivability of planted species is not achieved.
- aa. For a period of at least three years, the permittee shall monitor any exceptional value wetlands under 25 Pa. Code §§ 105.17(1)(i) and 105.17(1)(ii) that are disturbed, as authorized pursuant to

this permit. Monitoring reports shall be submitted to the respective DEP regional office in the spring (May 15) and fall (November 15) for the first two (2) calendar years following construction and once (November 15) in the third year. The monitoring reports shall contain information describing the wetland restoration and function and values at the time of inspection, photographs of the wetland with plans showing the location and orientation of each photograph, and a written plan to correct any deficiencies identified during the monitoring phase.

bb. 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:

cc. The permittee shall create Palustrine Forested (PFO) wetlands in accordance with their "Permittee-Responsible Compensatory Wetland Mitigation Plan" to compensate for the function and value loss associated with permanently converting 0.405 acres of PFO wetlands to Palustrine Emergent (PEM) wetlands.

dd. The proposed compensatory wetland mitigation site in Cumberland County: The permittee shall only plant the 0.58 acres in the seasonally saturated areas identified in the Compensatory Wetland Mitigation Plan and shall not plant in the areas identified as saturated in the present condition in the Compensatory Wetland Mitigation Plan.

ee. For at least five (5) years after the restoration activities are completed, the permittee shall monitor the compensatory mitigation sites, wetland restoration sites, streams restoration sites and floodway restoration sites. Within sixty (60) days of completing construction, the permittee shall submit "as-built" drawings for the forested wetland creation project to the DEP. Monitoring reports shall be submitted to the respective DEP Regional Office where the mitigation project(s) is(are) located at a frequency of every six (6) months for the first two (2) years after mitigation site construction and annually for three (3) 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 restoration sites and compensatory forest wetland enhancement sites have not achieved design objectives within the monitoring period, the permittee will undertake remedial work to assure establishment of functional wetland habitats.

ff. Restored and enhanced habitats shall be considered successful when they meet the design objectives.

- gg. Wetland compensation construction shall occur prior to or concurrently with wetland impacts requiring compensation as authorized by this permit.
- hh. Compensatory wetland mitigation shall be started and 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 revised plans to the respective DEP Regional Office if as-built conditions are significantly different from the original approved plans.
- ii. The permittee shall provide copies of the recorded deed restrictions or conservation easements for the compensatory wetland mitigation sites within 60) days after permit issuance. Time-stamped copies of the instruments shall be sent to the respective DEP Regional Office.

Horizontal Directional Drilling:

- jj. The permittee shall construct and operate the Horizontal Directional Drilling (HDD) crossings at wetlands, streams and floodways in accordance with Tables 2, 3, and 4 of the Joint Permit Application (Section F, Attachments, Environmental Assessment, Attachment 11, Resource Tables) in a manner to prevent a release of drilling fluid to "Regulated waters of this Commonwealth" (RWC). The permittee shall immediately notify the Department at 866-825-0208 in the event of an Inadvertent Return occurring, and immediately activate and implement the Pollution Prevention Control Plans (PPC Plans) including the HDD Inadvertent Return Contingency Plan (IRCP), Water Supply and Karst PPC Plans to prevent any impacts to RWC and other natural resources.
- kk. The permittee shall take measures to avoid mine voids and utilities.
- ll. The permittee shall visually monitor the ground surface and within RWC generally along the path of the Horizontal Directional Drilling 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 during all RWC crossings. 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.
- mm. Inadvertent returns that impact or discharge to streams, floodways or wetlands during the Horizontal Directional Drilling operations shall be remediated in compliance with the Inadvertent Return Contingency Plans. If clean-up operations differ from the submitted plans, prior approval from the respective DEP Regional Office will be necessary for any modifications to the Inadvertent Return Contingency Plan for additional mitigation.
- nn. 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 should 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:

- oo. The permittee shall comply with all applicable provisions of the Habitat Conservation Plan submitted and approved by the U.S. Fish and Wildlife Service (USFWS), PA Game Commission (PGC), PA Fish and Boat Commission (PFBC) and PA Department of Conservation and Natural Resources (DCNR) to protect federal and state listed species. Provide a copy of the plan to the Department prior to initiation of any work under this permit.
- pp. The permittee shall implement the approved Habitat Conservation Plan and in accordance with all PA Game Commission approvals for the Allegheny Woodrat (*Neotoma magister*). This includes no blasting or the use of herbicide on the project or in the vicinity of the project on PA DCNR lands as identified in the PGC clearance. Provide a copy of the plan to the Department prior to initiation of any work under this permit.
- qq. The permittee shall implement the Migratory Bird Conservation Plan approved by the USFWS. Provide a copy of the plan to the Department prior to initiation of any work under this permit.
- rr. The permittee shall implement all Avoidance Measures identified by the jurisdictional resource agencies for any threatened or endangered species or species of special concern. (permit specific avoidance measures should be listed).
- ss. The permittee shall implement the Avoidance Measures identified in Appendix A of the permit for all open trench wetland crossings in bog turtle (*Clemmys muhlenbergii*) counties identified by the USFWS as occupied, potentially occupied or adjacent habitats, unless otherwise specified by the USFWS.
- tt. The permittee shall comply with all protocols set forth by the USFWS for protection of the Rusty Patch Bumble Bee.
- uu. Prior to conducting any future maintenance activities on the pipeline or right of way which involves 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 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:

- vv. The permittee shall not perform any in-stream work in waters listed by the PAFBC as trout stocked streams and their tributaries between March 1 and June 15 without the prior written approval from the Pennsylvania Fish & Boat Commission's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.
- ww. The permittee shall not perform any in-stream work in waters listed by the Pennsylvania Fish and Boat Commission as Class A wild trout fishery streams and their tributaries between October 1 and April 1 without the prior written approval of the Pennsylvania Fish & Boat Commission's Division of Environmental Services, 450 Robinson Lane, Bellefonte, PA 16823-9620; telephone 814.359.5147.
- xx. The permittee shall not perform any in-stream work in waters listed by the Pennsylvania Fish and Boat Commission's other wild trout streams or their tributaries 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. (In addition to those listed in the application this special condition also applies to streams S-CJ2, S-CJ3, S-CJ4. (the specific streams listed are permit specific).
- yy. Other seasonal restrictions stated in the various Habitat Conservation Plans shall be complied with unless a written variance is issued by the appropriate resource agency.

Miscellaneous:

- zz. Maintenance mowing or herbicide spraying 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.
- aaa. This permit does not convey any real property rights or interests or authorization to trespass on privately-owned riparian land. By accepting this permit, the permittee certifies that he/she holds title, easement, right or other real interest in the riparian land. Any dispute over ownership of this land is solely a matter for private litigation.
- bbb. The permittee may not commence construction activities on Pennsylvania Game Commission (PGC) lands without prior written approval from PGC.
- ccc. 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.
- ddd. All temporary water withdrawal intake structures and all appurtenant works shall be removed from the watercourse, body of water, floodway, and floodplains within sixty (60) days of initial placement, unless otherwise extended in writing by the Department.
- eee. 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
- fff. Place 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.
- ggg. If during excavation, a groundwater seep is encountered, a trench plug shall be placed at ten (10) feet from each side of the seep.
- hhh. Any french drains installed as part of de-watering for construction activities shall be removed or otherwise rendered inoperable prior to final site restoration.
- iii. Water pumped from any construction area shall be diverted into a sediment trap, basin, or a filter bag discharging into an appropriate vegetated filter area to prevent sediment from being discharged into any waters of the Commonwealth.
- jjj. 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 RWC 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.
- kkk. The permittee shall cross intermittent and perennial streams through the use of trenchless methods (HDD or Direct Boring [DB]) 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.
- lll. Depth of Pipeline in Stream Bed: The permittee shall locate all pipelines under stream beds such that there will be a minimum of three feet of cover between the top of the pipe or encasement and the lowest point in the stream bed, unless the pipeline is in rock, where a minimum cover of one foot shall be provided.

- mmm. 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.
- nnn. This permit authorizes specific impacts to *RWC* that were specifically described in the permit applications and revisions. Any proposed changes regarding the specific impacts will require a permit modification.
- ooo. Any additional impacts to *RWC*, 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.
- ppp. No deviation in the construction methodology or project design that is shown on the approved drawings is authorized under this permit unless approved through an amendment by the Department.
- qqq. 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.
- rrr. The permittee shall follow the measures specified in the Preparedness, Prevention, and Contingency Plan during construction.
- sss. The permittee shall maintain a copy of the Preparedness, Prevention, and Contingency Plan is 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.

