Alternatives Analysis Table
Riverine Resources
Bucks County

Watercourse ID and Crossing Number[1]	Watercourse Name	Milepost[2]	Latitude	Longitude	Primary Pipeline Crossing Method[3]	Secondary Pipeline Crossing Method[3]	Tertiary Pipeline Crossing Method[3]	Geology Constraints	Topography Constraints	Insufficient Workspace to Stage Trenchless	Practicality	Other (See Justification)	Implementing Trenchless Technology	Routing to Minimize	Crossing at Narrowest Location	Co-Locating	Reducing LOD	Minimizing Construction Duration	Adhering to Construction Timing Windows	Implementing BMPs	Justification
051515_JC_1004_E_MI	UNT to Delaware River	76.2	40.596724	-75.21127	DPX	FX	DX-NF				X	X			X		X	X		X	Timing to cross justifies open cut. Workspace reduced to 75' in stream and floodway.
052915_JC_1002_C_IN	Delaware Canal	77.6	40.584126	-75.1949	HDD	HDD	HDD				X	X	X							X	Trenchlessly crossed by Delaware River HDD.
122315_DB_1001_P_MA	Delaware River	77.6	40.584071	-75.194299	HDD	HDD	HDD				X	X	X							X	Trenchlessly crossed by Delaware River HDD.

Notes:
1. In instances where a watercourse is crossed by the proposed pipeline or workspace multiple times, crossing numbers (e.g. "-1", "-2") have been added to the Watercourse ID.
Watercourse ID Key: P = perennial, I = intermittent, E = ephemeral, MA = major, IN = intermediate, MI = minor, C = canal, D = ditch
2. All route deviations implemented after the FERC Certificate Application are denoted with an "R" and indicate a MP equation. MPs with an "R1" indicate route deviations implemented and provided to FERC prior to the issuance of the DEIS. MPs with an "R2" indicate route deviations implemented as part of the September 2016 Route Update. MPs with an "R3 indicate route deviations implemented post-FERC Certificate issuance. All MPs without an "R" indicate that the route has not changed since the Certificate Application.
3. Crossing Type Key for Watercourse Channels:
- BX = Conventional Bore Crossing
- CD = Cofferdam Crossing
- DPX = Dam-and-Pump Crossing
- DX-NF = Dry Crossing If No Flow
- FX = Flume Crossing
- HDD = HDD Crossing
- N/A = Not Applicable