

ENGINEERING REVIEW FOR CHAPTER 105 APPLICATIONS

Project Name: PA Pipeline Project AKA (Mariner East II) Application No. E15-862
Chester County APS No. 879047
 AUTH No. 1087479
 Permittee: Sunoco Pipeline, L.P, (SPLP)

Special Conditions: N/A

Special Conditions Attached	

Record of Decision

- A. Project Description (duplicate final description from *PA Bulletin*):
 Published as Application Received on: 06/25/2016

E15-862, Sunoco Pipeline, L.P, (SPLP), 535 Fritztown Road, Sinking Spring, PA 19608, Mariner East II Pennsylvania Pipeline Project, in West Nantmeal Township, East Nantmeal Township, Wallace Township, Upper Uwchlan Township, Uwchlan Township, West Whiteland Township, West Goshen Township, East Goshen Township, Westtown Township, and Elverson Borough, **Chester County**, ACOE Philadelphia District. The proposed project starts at West Main Street in Elverson, PA Quadrangle N: 40° 9' 20.97"; W: -75° 50' 35.65", and ends at the intersection of E. Street Road and Middletown Road in Westtown Township, PA, West Chester PA Quadrangle N: 39° 57' 1.35"; W: -75° 30' 38.10".

The project consists of the installation and maintenance of approximately 24 miles long, of 20 inch and 16 inch pipeline and appurtenant structures. The proposed project impacts in Chester County include a total of 52 linear feet of temporary impacts to Marsh Creek (HQ-TSF,MF), 1 unnamed tributary to Marsh Creek (HQ-TSF,MF), a total of 1,095 linear feet of permanent impacts to Black Horse Creek (HQ-TSF,MF), 2 unnamed tributaries to Black Horse Creek (HQ-TSF,MF), East Branch Chester Creek (TSF,MF), 3 unnamed tributary to East Branch Chester Creek (TSF,MF), Marsh Creek (HQ-TSF,MF), 26 unnamed tributaries to Marsh Creek (HQ-TSF), Shamona Creek (HQ-TSF,MF), 7 unnamed tributaries to Shamona Creek (HQ-TSF,MF), South Branch French Creek (EV,MF), 5 unnamed tributaries to South Branch French Creek (EV,MF), Valley Creek (CWF,MF), 9 unnamed tributaries to Valley Creek (CWF,MF), 2 unnamed tributaries to School House Run (HQ-TSF,MF), 1 unnamed tributary to Ridley Creek (HQ-TSF,MF), and 3.435 acres of permanent floodway impacts, and 1.833 acres of temporary floodway impacts, and 0.001 acres of temporary impacts to Palustrine Emergent (PEM), Palustrine Forested (PFO) and Palustrine Scrub-Shrub (PSS) wetlands and 3.713 acres of permanent impacts to PEM, PFO, and PSS wetlands. No compensation is being proposed by the applicant for the proposed permanent project impacts in Chester County. The proposed project impacts in this permit application are associated with a proposed transmission pipeline project extending approximately 306 miles and 255 miles in Pennsylvania between Houston Borough, Washington County, PA and Marcus Hook Borough, Delaware County, PA.

B. Federal Permitting:

Attach SPGP: Reporting Non-Reporting Ineligible
Other Federal Permitting: Federal Authorization will be issued by US ACOE

C. Water Quality Certification: N/A

Are there any special considerations related to 401 WQC? Yes No

Is there another federal license/ permit required? (e.g. FERC) Yes No

Explain any special circumstances below:

Only Federal Permit is ACOE Federal Authorization

D. Engineering / Project Management Considerations:

Preapplication Meeting(s) held?

Yes No

Date: 5/23/2014

Details DEP / Sunoco "Kickoff Meeting - RCSOB

Regional office pre-application meetings held thereafter

- Coordination with other permits or approvals (check all that apply):

<input type="checkbox"/> NPDES Construction	<input checked="" type="checkbox"/> Air
<input checked="" type="checkbox"/> CCD E&S Plan Approval	<input type="checkbox"/> Waste Mgmt.
<input type="checkbox"/> Dams	<input type="checkbox"/> SDW
<input type="checkbox"/> CLW (537, WQM Part 2, etc.)	<input type="checkbox"/> ECB – Act 2, HSCA, Superfund
<input checked="" type="checkbox"/> Other: <u>Individual E&S Permit</u>	

- Application meets the requirement(s) for the following Chapter 105 Subchapters:

A. General Provisions

105.14. Review of applications (See Attached) Yes No

B. Dams and Reservoirs

105.71. Scope Yes No

C. Culverts & Bridges

105.151. Permit applications for construction or modification of culverts and bridges Yes No N/A

105.152. Permit applications for O&M of existing culverts and bridges. Yes No N/A

105.161. Hydraulic Capacity for culverts and bridges Yes No N/A
General criterial for design flow: Rural 25-year Suburban 50-year Urban 100-year

105.162. Multiple Pipes and Spans Yes No N/A

105.163. Bridge Piers Yes No N/A

105.164. Bridge Abutments Yes No N/A

105.165. Height of bridges and culverts Yes No N/A

105.166. Placement of culverts Yes No N/A

D. Stream Enclosures

105.191. Permit applications for construction or modification of Yes No N/A

stream enclosures.			
105.192. Permit applications for O&M of stream enclosures.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.201. Hydraulic capacity of stream enclosure	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
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<input type="checkbox"/> E. Channel Changes & Dredging			
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105.231. Permit applications for construction or modification of channel change and dredging for facility construction & maintenance.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.232. Maintenance dredging	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.233. Removal of sand, gravel, and other valuable minerals.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.241. Flood effect	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.242. Channel alignment and cross section.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.245. Disposal of waste materials	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
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<input type="checkbox"/> F. Fills, Levees, Floodways, & Streambank Retaining Devices			
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105.261. Permit applications for construction or modification of fills, levees, floodwalls and streambank retaining devices.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.262. Permit applications for existing fills, levees, floodwalls and streambank retaining devices.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.271. General Criteria (fills, levees, floodways, etc.)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.272. Waste materials	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.273. Slopes	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.274-276. Top Width, Interior drainage, & Freeboard of Levees and/or Floodwalls	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
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<input checked="" type="checkbox"/> G. Stream Crossings, Outfalls, & Headwalls			
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105.301. Permit applications for construction or modification of stream crossings, outfalls and headwalls	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
105.302. Permit applications for existing stream crossings by pipelines for conveyance of petroleum products and gas.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
105.311. General criteria (for stream crossings, outfalls, pipelines, etc.)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
105.313. Pipelines under streams	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
105.314. Pipelines along streams	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
105.315. Aerial crossings	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
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<input type="checkbox"/> H. Docks, Wharves & Bulkheads			
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105.331. Permit applications for new and existing docks, wharves & bulkheads	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.332. Riparian property	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
105.341. Passage of ice and flood waters	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
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<input type="checkbox"/> J. Discharges of Dredged or Fill Material			
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105.401. Permit applications for discharges of dredged material or fill material into regulated waters of this Commonwealth	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
105.411. General criteria	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

- Municipal Consistency (check all that apply) – See 105.14.(b)(9) Review of applications below N/A

- Floodplain
- Storm water Management (Act 167)
- Consistency to be provided
- Information submitted per 105.13

- Method of Construction

The project involves work when the method of construction was pertinent in DEP's review. If so, please explain below: Yes No N/A

See discussion on the submitted alternatives analysis below.

- Submerged Lands of the Commonwealth

Application meets the following subsections:

- | | | | |
|---|------------------------------|--|---|
| 105.31. Property rights | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 105.32. Projects – proper purpose | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 105.33. SLLA Required | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | |
| The project has an existing permit or old navigation license. | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |

Existing Permit or License Number: _____

- Public Comments

Public comments have been received Yes No
 C&R document has been prepared and is attached. Yes No

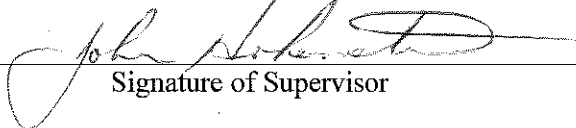
- **A project-wide C&R document has been prepared**

E. Recommendations

- With the provided information and the results of this review, it has been determined that the proposed project meets all the requirements of Chapter 105, including Subchapter G, 105.291 relating to Stream Crossings, Outfalls and Headwalls. The project is proposed in a manner that will not pose an increased threat to public health or safety. This application is therefore recommended for approval pending any environmental concerns.


Signature of Reviewer

2/10/17
Date


Signature of Supervisor

2/10/17
Date

Attachments

Explanation of Review:

This Record of Decision (ROD) is based on the review of the Chester County Joint Permit Application (JPA) prepared by Tetra Tech on behalf of their client Sunoco Pipeline, L.P. (SPLP) for the Pennsylvania Pipeline Project (a.k.a., Mariner East 2). The overall project includes work in seventeen (17) counties. A specific JPA was prepared for each of the counties. The applicant submitted a JPA on August 17, 2015 which was determined to be incomplete on October 26, 2015. The applicant responded with general revisions to their JPA on December 8, 2015 but the JPA remained incomplete. Subsequently a revised JPA was submitted and determined to be complete on June 14, 2016. However, after review the JPA was deemed technically deficient on September 6, 2016. SPLP requested a time extension on October 31, 2016 to submit additional information. An extension was granted allowing supporting information to be submitted on or before December 7, 2016. SPLP submitted a revised entire JPA on December 6, 2016. DEP sent subsequent email comments to SPLP (between December 6, 2016 and February 2, 2017) requesting additional clarifications. SPLP responded by providing this information. In addition to the applicant's supplemental information, public comments have been accepted by the DEP beginning on June 25, 2016 and a public meeting was held in West Chester on August 10, 2016. These submittals and comments are available in the administrative record.

Construction Methodology

The applicant has considered multiple methods of construction described in detail including trenching, pipe stringing, pipe preparation and lowering in. Backfill and grade restoration, hydrostatic testing, cathodic protection, block valve location, and pump stations and site clean-up and restoration were also taken in to consideration. The applicant has included the following practices to be implemented during construction within residential areas. These include stove-pipe construction method and the drag-section method (these methods are typically used when the pipeline is to be installed in very close proximity to an existing structure and an open trench would not be feasible). Resource crossings are proposed utilizing HDD and open cut methods which include provision for dry pump by pass, dry coffer dams, and dry flumes.

The proposed stream crossings for the portion of the overall project within Chester County will be accomplished using open trenches, conventional boring and horizontal directional drilling (HDD) methods where appropriate. Open trench methods will utilize appropriate stream diversions that may include the pump bypass, flume, cofferdam or, in the case of channel crossings where stream flow is absent, dry open-cut crossing methods. Selection of which dry method will be used will be determined in the field at the time of crossing and will be based on an assessment by the contractor and SPLP's Environmental Inspector. The method selected will be the method that is determined to be best suited to the physical stream conditions, provides the least disturbance and ensures the most expedient crossing to minimize the overall stream impact. All streams impacted by the proposed project will be restored to pre-existing conditions following construction. Streams impacted by the proposed project will be restored in accordance with the E&S Plan (Attachment 12) that dictates the restoration of pre-existing elevation/contours, channel substrate, stream bank conditions vegetation and flow conditions/patterns to the original conditions.

There is no hydraulic impact for any of the cross sections relating to the proposed pipeline installation at the stream crossings. A minimum temporary impact may occur during the coffer dam installation. (See attachment 13 at the end of this report). The proposed project does not alter the flow volumes, directions, nor has any impact in the floodway, floodplain and WSEL. Therefore, DEP did not request any H&H analysis per 105.13(e)(1)(vi) because the project does not impact FEMA designated floodway maps in East Goshen, East Nantmeal, East Whiteland, Elverson, Upper Uwchlan, Wallace, West Goshen, West Nantmeal and Westtown Townships. The only Twp. where the project crosses upon FEMA detailed floodway study in Chester County is West Whiteland Township where no above ground facilities or access road are proposed in the FEMA designated floodways; These pipes will be crossed using horizontal directional drill techniques, with no impact to the existing WSEL, minimizing surface disturbance and potential project impact to these waterbodies.

§ 105.14. Review of applications.

- (a) *An application will be reviewed to determine the proposed project's effect on health, safety and the environment, in accordance with prevailing practices in the engineering profession and in accordance with current environmental principles.*

Based on this engineering evaluation report and the accompanying detailed environmental report, this proposed pipe installation project will not pose a threat to health or safety, and all impacts to property or the environment have been adequately mitigated. After careful evaluation, I find the proposed permit application meets Chapter 105 Rules and Regulations relating to prevailing practices in the engineering profession, and therefore recommend this project for approval.

- (b) *In reviewing a permit application under this chapter, the Department will use the following factors to make a determination of impact:*

- (1) *Potential threats to life or property created by the dam, water obstruction or encroachment.*

Reference is made to the following submitted plans that address threats to life and property.

- **Preparedness, Prevention and Contingency Plan**
- **Water Supply Assessment, Preparedness, Prevention and Contingency Plan**
- **HDD Inadvertent Return Assessment, Preparedness, Prevention and Contingency Plan**
- **Void Mitigation Plan for Karst Terrain and Underground Mining**

- (2) *Potential threats to safe navigation created by the dam, water obstruction or encroachment.*

There are no proposed changes to navigable waters.

- (3) *The effect of the dam, water obstruction or encroachment on the property or riparian rights of owners upstream, downstream or adjacent to the project.*

To minimize effects, the majority of the proposed new ROW will be co-located adjacent to existing utility corridors or co-located within the existing SPLP Mariner East pipeline system that is currently used for the transportation of NGL's. In areas where land rights are required, the Applicant has entered into agreements with the landowners in regards to installation, operation, and maintenance of the pipelines.

- (4) *The effect of the dam, water obstruction or encroachment on regimen and ecology of the watercourse or other body of water, water quality, stream flow, fish and wildlife, aquatic habitat, instream and downstream uses and other significant environmental factors.*

See the Environmental Record of Decision.

- (5) *The impacts of the dam, water obstruction or encroachment on nearby natural areas, wildlife sanctuaries, public water supplies, other geographical or physical features including cultural, archaeological and historical landmarks, National wildlife refuges, National natural landmarks, National, State or local parks or recreation areas or National, State or local historical sites.*

See the Environmental Record of Decision, the Water Supply Assessment PPC Plan, and the Phase I Archaeological Investigations Report.

- (6) *Compliance by the dam, water obstruction or encroachment with applicable laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.*

See the Environmental Record of Decision.

- (7) *The extent to which a project is water dependent and thereby requires access or proximity to or siting within water to fulfill the basic purposes of the project. The dependency must be based on the demonstrated unavailability of any alternative location, route or design and the use of location, route or design to avoid or minimize the adverse impact of the dam, water obstruction or*

encroachment upon the environment and protect the public natural resources of this Commonwealth.

See the Environmental Record of Decision.

(8) Present conditions and the effects of reasonably foreseeable future development within the affected watershed upstream and downstream of the dam, water obstruction or encroachment:

- (i) *A dam, water obstruction or encroachment shall be designed, constructed and operated to assure adequacy and compliance with this chapter, taking into account reasonably foreseeable development within the watershed.*

The applicant has utilized the existing pipeline corridor for the majority of the project. But during and after the selection process of the final right of way, various minor reroutes to the alignment were incorporated to avoid and/or reduce potential adverse impacts to residential and commercial developments.

- (ii) *In assessing the impact of future development upon a dam, water obstruction or encroachment, the Department may require the applicant to submit data regarding estimated development potentials and municipal, county and regional planning related to the affected watershed.*

This was not required as the applicant has utilized the existing pipeline corridor for the majority of the project.

- (9) Consistency with State and local floodplain and stormwater management programs, the State Water Plan and the Coastal Zone Management Plan.*

DEP has considered consistency with the local floodplain and stormwater management plans utilizing the letter requirements of Sections 105.13(d)(1)(vi) and 105.13(k) and base our review on the overall requirements of both Chapters 105 and 106, including the Floodplain Management Analysis that was provided by the applicant to the municipality.

- (10) Consistency with the designations of wild, scenic and recreational streams under the Wild and Scenic Rivers Act of 1968 (16 U.S.C.A. § § 1271—1287) or the Pennsylvania Scenic Rivers Act (32 P. S. § § 820.21—820.29), including identified 1-A candidates.*

See the Environmental Record of Decision.

- (11) Consistency with State antidegradation requirements contained in Chapters 93, 95 and 102 (relating to water quality standards; wastewater treatment requirements; and erosion and sediment control) and the Clean Water Act (33 U.S.C.A. § § 1251—1376).*

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

- (12) Secondary impacts associated with but not the direct result of the construction or substantial modification of the dam or reservoir, water obstruction or encroachment in the area of the project and in areas adjacent thereto and future impacts associated with dams, water obstructions or encroachments, the construction of which would result in the need for additional dams, water obstructions or encroachments to fulfill the project purpose.*

See the Environmental Record of Decision.

- (13) For dams, water obstructions or encroachments in, along, across or projecting into a wetland, as defined in § 105.1 (relating to definitions), the Department will also consider the impact on the wetlands values and functions in making a determination of adverse impact.*

See the Environmental Record of Decision.

- (14) The cumulative impact of this project and other potential or existing projects. In evaluating the cumulative impact, the Department will consider whether numerous piecemeal changes may result in a major impairment of the wetland resources. The Department will evaluate a particular wetland*

site for which an application is made with the recognition that it is part of a complete and interrelated wetland area.

See the Environmental Record of Decision.

(c) In reviewing a permit application under § 105.11(c) (relating to permit requirements) and section 6(c) of the act (32 P. S. § 693.6(c)) for the operation and maintenance of an existing dam, water obstruction or encroachment, the Department will use the following factors:

- (1) Potential threats to life, property or safe navigation created by the continuing operation or maintenance of the project.*

The applicant has supplied PPC Plans that address the continued operation and maintenance of the proposed pipeline and appurtenant structures.

- (2) Adverse impact on stream flow, water quality or the environment which might be reduced or mitigated by reasonable changes in the operation of the project.*

The submitted operation and maintenance procedures address adverse impacts to stream flow, water quality or the environment.

- (3) Compliance of the operation and maintenance of the project with applicable laws administered by the Department, the Fish and Boat Commission and river basin commissions created by interstate compact.*

The submitted operation and maintenance procedures address compliance with all appropriate local, state, and federal permits and authorizations