



November 2, 2016

Forward Township Board of Supervisors
1000 Golden Circle
Elizabeth, PA 15037

**Reference: Sunoco Pipeline L.P. – Pennsylvania Pipeline Project
Act 167 Stormwater/Floodplain Management Program Consistency Request-
UPDATED Project Workspaces**

Dear Supervisors:

On behalf of Sunoco Pipeline, L.P., Tetra Tech, Inc. is writing to provide updated workspaces/floodplain maps associated with the Pennsylvania Pipeline Project (Project) in Forward Township (Township) as part of our Chapter 105 Water Obstruction and Encroachment Permit Application and request for Act 167 Stormwater/Floodplain Management Consistency Request. Similar to our previous requests on December 23, 2015 and February 8, 2016, we continue to seek a consistency determination from Forward Township in regard to the local Floodplain Management and Stormwater Management Program pursuant to 25 Pennsylvania Code, Chapter 105 Regulations (Sections 105.14(b)(9), 105.13(e)(1)(v-vi)), and under the Stormwater Management Act (32 P.S., §§ 680.1—680.17), respectively. Please find attached the latest Project mapping identifying the updated Project workspaces in the Township. The updated workspaces are highlighted as additions and subtractions in the maps provided. Note additional workspace/shifts in the workspace are identified as shown on Sheets 1-2, 4, 5, 8, and 15.

As shown, the latest changes to the workspace do not affect our previous stormwater consistency analysis. The Project will be designed, constructed, and operated in compliance with all applicable provisions of 25 Pennsylvania Code, Chapter 102 Regulations (Erosion and Sediment Control and Post Construction Stormwater Management Best Management Practices including the implementation of Antidegradation Best Available Combination of Technologies (ABACT methods) where applicable, to maintain the designated use of receiving waters in the area and no increase in stormwater runoff, rate or volume would occur.

Consistent with the letter we previously sent, no aboveground facilities and no new access roads are proposed in FEMA designated floodways or 100-year floodplains. The newly added workspace (shown on Sheets 1-2, 8) are located within a FEMA-designated floodway and/or 100/500-year floodplain. However, this workspace added as part of the Project pipeline permanent ROW would be crossed using horizontal directional drill reducing surface disturbance and potential Project impacts or currently exist as part of the roadway. No other newly added workspace is located within a FEMA-designated floodways/floodplains. Furthermore, the entire pipeline will be buried and preconstruction contours and elevations restored following pipeline installation.

Based on the above, we have determined that the updated workspace changes do not affect our previous analysis. Please provide input or if you have further questions/comments or disagree with this determination, please contact me, Ailene Batoon, or Rachel Silva at (716) 849-9419 or via email at ailene.batoon@tetratech.com or rachel.silva@tetratech.com within 30 days of receipt of this letter. Thank you for your time.

Sincerely,
Tetra Tech, Inc.

A handwritten signature in black ink, appearing to read 'Ailene Batoon', written over a printed name.

Ailene Batoon

Enclosures: Updated Site Plan/Floodplain Maps

Tetra Tech



















301 Ellicott St, Buffalo, New York 14203
Tel 716.849.9419 Fax 716.849.9420 www.tetratech.com

FORWARD
UNION





Sheet Identifier



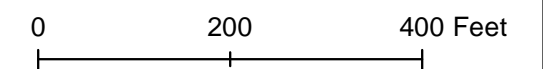
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-  Added Workspace
-  Subtracted Workspace
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-  Bore Alignment
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-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
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-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones


-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 1 Scale 1:2400

Prepared By:  TETRA TECH Date: 10/2016




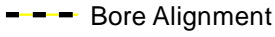
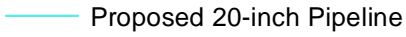
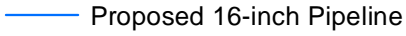



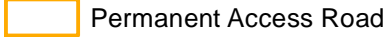
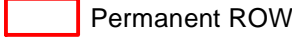
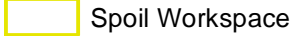

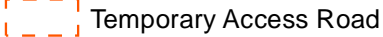
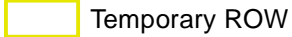


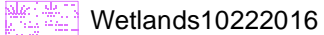
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National Flood Hazard GIS Layer
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<http://www.floodmaps.fema.gov/NFHL/status.shtml> 

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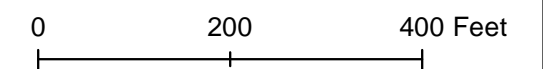
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FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 2 Scale 1:2400

Prepared By:  TETRA TECH Date: 10/2016




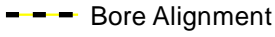
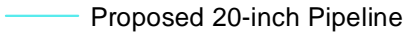
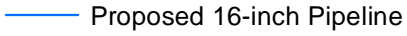



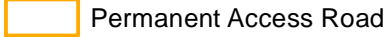
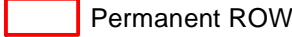
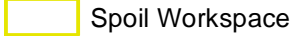

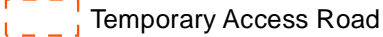
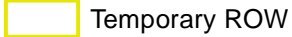
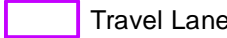

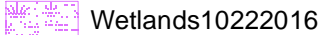
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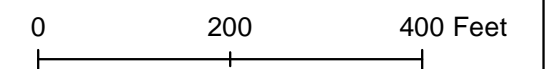
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FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



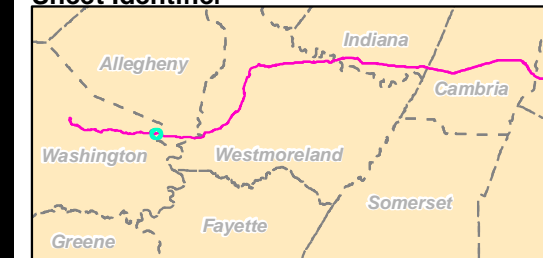
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Prepared By:  TETRA TECH Date: 10/2016




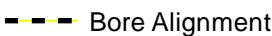
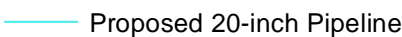
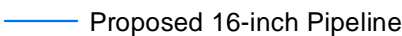












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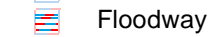

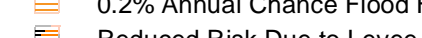
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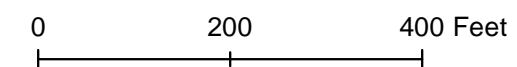
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FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 4 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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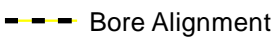
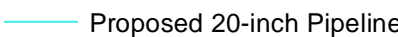
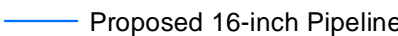












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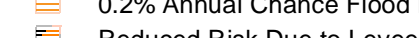
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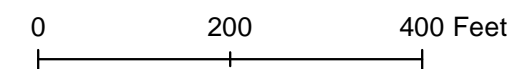
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FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 5 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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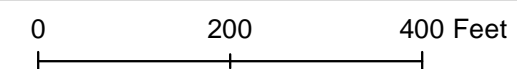
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FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



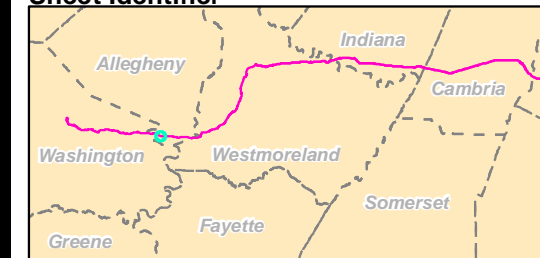
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Prepared By:  **TETRA TECH** Date: **10/2016**




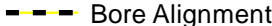
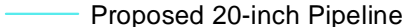













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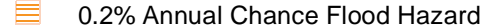

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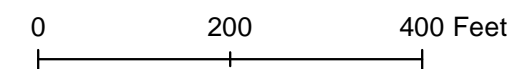
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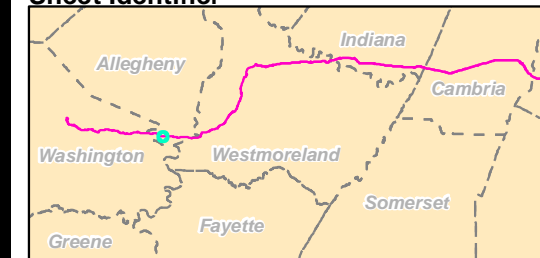
Sheet 7 **Scale 1:2400**

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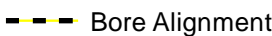
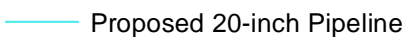
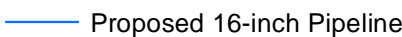












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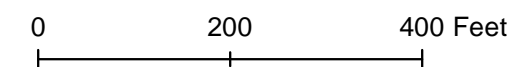
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Sheet 8 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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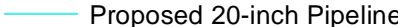













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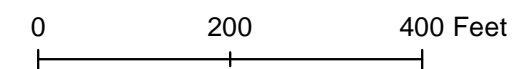
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Sheet 9 **Scale 1:2400**

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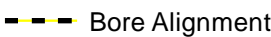
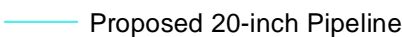
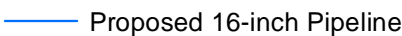












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 Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>



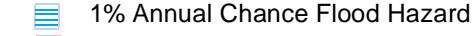


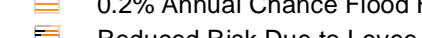
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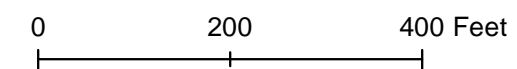
Legend

-  Added Workspace
-  Subtracted Workspace
-  HDD Alignment
-  Bore Alignment
-  Proposed 20-inch Pipeline
-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
-  Block Valve Setting LOD
-  Permanent Access Road
-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 10 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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Floodplain & Floodway Data:
 National Flood Hazard GIS Layer
 Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>



Sheet Identifier



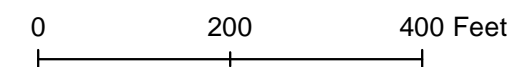
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- Added Workspace
- Subtracted Workspace
- HDD Alignment
- Bore Alignment
- Proposed 20-inch Pipeline
- Proposed 16-inch Pipeline
- ATWS
- Block Valve
- Block Valve Setting LOD
- Permanent Access Road
- Permanent ROW
- Spoil Workspace
- Stations
- Temporary Access Road
- Temporary ROW
- Travel Lane
- Municipal Boundary
- Wetlands10222016

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Floodway
- 0.2% Annual Chance Flood Hazard
- Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



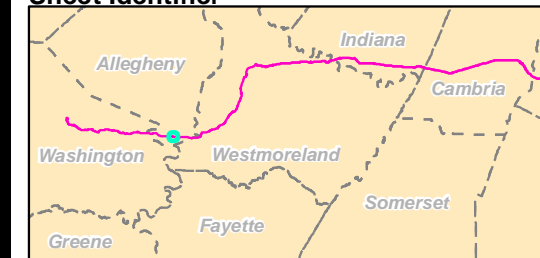
Sheet 11 Scale 1:2400

Prepared By:	Date: 10/2016
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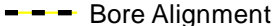
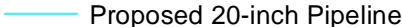
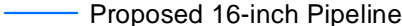












Floodplain & Floodway Data:
National Flood Hazard GIS Layer
Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>





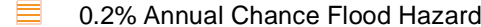

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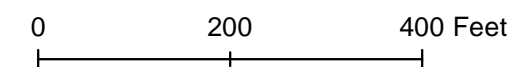
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-  Subtracted Workspace
-  HDD Alignment
-  Bore Alignment
-  Proposed 20-inch Pipeline
-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
-  Block Valve Setting LOD
-  Permanent Access Road
-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 12 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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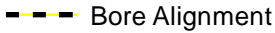
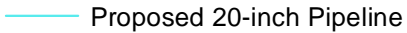
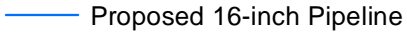












Floodplain & Floodway Data:
 National Flood Hazard GIS Layer
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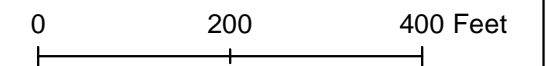
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-  HDD Alignment
-  Bore Alignment
-  Proposed 20-inch Pipeline
-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
-  Block Valve Setting LOD
-  Permanent Access Road
-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 13 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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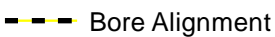
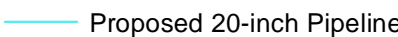
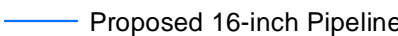












Floodplain & Floodway Data:
 National Flood Hazard GIS Layer
 Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>



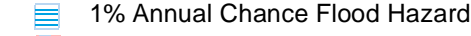
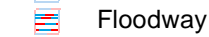

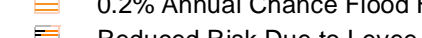
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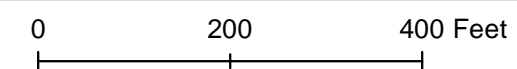
Legend

-  Added Workspace
-  Subtracted Workspace
-  HDD Alignment
-  Bore Alignment
-  Proposed 20-inch Pipeline
-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
-  Block Valve Setting LOD
-  Permanent Access Road
-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 14 **Scale 1:2400**

Prepared By: 	Date: 10/2016
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Floodplain & Floodway Data:
 National Flood Hazard GIS Layer
 Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>




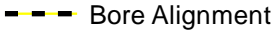
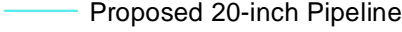
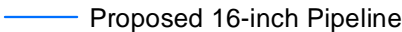





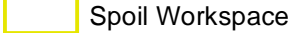

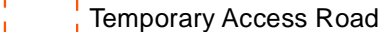



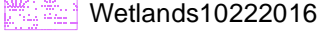


ELIZABETH
FORWARD





Sheet Identifier



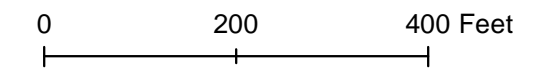
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-  Subtracted Workspace
-  HDD Alignment
-  Bore Alignment
-  Proposed 20-inch Pipeline
-  Proposed 16-inch Pipeline
-  ATWS
-  Block Valve
-  Block Valve Setting LOD
-  Permanent Access Road
-  Permanent ROW
-  Spoil Workspace
-  Stations
-  Temporary Access Road
-  Temporary ROW
-  Travel Lane
-  Municipal Boundary
-  Wetlands10222016

Flood Hazard Zones

-  1% Annual Chance Flood Hazard
-  Floodway
-  0.2% Annual Chance Flood Hazard
-  Reduced Risk Due to Levee

FEMA NFHL Designated Floodplains along the Sunoco Pennsylvania Pipeline Project



Sheet 15 Scale 1:2400

Prepared By: 

Date:
10/2016


Floodplain & Floodway Data:
National Flood Hazard GIS Layer
Downloaded October, 2015
<http://www.floodmaps.fema.gov/NFHL/status.shtml>



From: TrackingUpdates@fedex.com
Sent: Thursday, November 03, 2016 3:02 PM
To: Silva, Rachel
Subject: FedEx Shipment 777621215920 Delivered

Your package has been delivered

Tracking # 777621215920

Ship date: Wed, 11/2/2016	Delivery date: Thu, 11/3/2016 3:00 pm	
AILENE BATOON TETRA TECH - HOME Buffalo, NY 14203 US	 Delivered	Board of Supervisors Forward Township 1000 Golden Circle ELIZABETH, PA 15037 US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	777621215920
Status:	Delivered: 11/03/2016 3:00 PM Signed for By: K.STETTER
Reference:	112IC05958, 16
Signed for by:	K.STETTER
Delivery location:	ELIZABETH, PA
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Standard Overnight
Packaging type:	FedEx Envelope
Number of pieces:	1
Weight:	0.50 lb.
Special handling/Services:	Direct Signature Required Deliver Weekday
Standard transit:	11/3/2016 by 3:00 pm

Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 2:02 PM CDT on 11/03/2016.

All weights are estimated.

