

## **Requirement N**

### Hydrologic and Hydraulic Analysis

### **Hydrologic and Hydraulic Analysis**

There are no above-ground watercourse channel fills on the Project in Washington County; therefore, a hydrologic and hydraulic analysis is unnecessary.

## **Requirement O**

### Stormwater Management Analysis and Consistency Letter



March 26, 2018

Brandon M. Walker, PE  
AECOM  
Foster Plaza 6  
681 Andersen Drive  
Pittsburgh, PA 15220

RE: **Shell Pipeline Company, LP; Falcon Ethane Pipeline System  
Robinson Township Stormwater Ordinance Compliance Review**

Dear Mr. Walker:

We have completed our review of the Falcon Ethane Pipeline System, Post-Construction and Stormwater Management and Site Restoration plans dated 12/05/2017 received by our office via electronic delivery, as prepared by AECOM. The plans were reviewed for Robinson Township Stormwater Management Ordinance compliance only.

The above referenced plans conform to the Robinson Township Stormwater Management Ordinance, Ordinance Number 01-11 of 2011.

Please contact me with any questions.

Sincerely,

A handwritten signature in black ink that reads 'Kevin J. Chappell'.

Kevin J. Chappell, PLS, PE  
HMT and Associates

CC:  
Robinson Township Manager  
Robinson Township Solicitor



**GATEWAY ENGINEERS**

100 MCMORRIS ROAD  
PITTSBURGH, PA 15205-9401  
412.921.4030 PHONE  
855.634.9284 TOLL-FREE  
412.921.9960 FAX

[GatewayEngineers.com](http://GatewayEngineers.com)

April 2, 2018  
C-27078

Chartiers Township  
2 Buccaneer Rive  
Houston PA 15342-1181

Att: Jodi Noble, Township Manager

Re: Stormwater Management Consistency – Falcon Ethane Pipeline System  
Chartiers Township


Dear Jodi:

We have reviewed the information submitted for the above referenced pipeline project relative to the stormwater management for the site. The plan as prepared by AECOM, Dated December 2017, does not propose any improved areas per the construction plans. The proposed construction of the pipeline does not result in the increase in any runoff on the properties where the construction will occur and the disturbed ground will be returned to its original or better condition, therefore it is consistent with the Chartiers Township Stormwater Management Ordinance.

The review for stormwater consistency is based on information prepared by others and assumes that the information is correct. The applicant will be required to obtain an NPDES permit for the proposed construction activities. All stormwater and erosion and sedimentation controls during construction activities will be the responsibility of the applicant for compliance with the permit.

If you have any questions, please contact me.

Sincerely;  
THE GATEWAY ENGINEERS, INC.

  
Jennifer J. Slagle, P.E.  
Township Engineer

Cc: Adam McGurk, Planning/Zoning Officer, Chartiers Township  
Joseph W. Ryan, P.E., AECOM

G:\Projects\27000 Chartiers\27079 Shell- Falcon Ethane Pipeline\Review Letters\Stormwater Management Consistency Letter 04.02.18.doc

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**SUPERVISORS**

Gary Farner, Chairman  
Don Reed, Vice Chairman  
George Rice

**MANAGER**

Erin Sakalik

Mount Pleasant Township



**SOLICITOR**

Tom McDermott

Washington County, Pennsylvania  
31 McCarrell Road  
Hickory, PA 15340  
724-356-7974

April 12, 2018

Mr. Brandon Walker, PE  
Project Manager  
AECOM  
681 Andersen Drive, Suite 400  
Pittsburgh, PA 15220

RE: Falcon Ethane Pipeline

Dear Mr. Walker:

The Township Engineer is in receipt of your request for a review of your proposed pipeline to determine if the project will meet the requirements of our Storm Water Ordinance.

Please be aware that the Township requires an escrow amount of \$1,000 as security against professional consultant review fees incurred for the review. I shall instruct the Township Engineer to promptly complete and issue its report upon my receipt of the escrow deposit.

Thank you in advance for your anticipated cooperation. Of course, please do not hesitate to contact me if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Erin Sakalik', written over a horizontal line.

Erin Sakalik  
Manager

cc: S. Wingrove, PE  
T. McDermott, Esq.  
G. Farner, Chairman



**Lennon, Smith, Souleret  
Engineering, Inc.**

Civil Engineers and Surveyors

846 Fourth Avenue, Coraopolis, PA 15108  
(412) 264-4400 • (412) 264-1200 Fax  
info@lsse.com • www.lsse.com

**Managing Principals:**  
Lawrence J. Lennon, P.E., D.WRE  
Daniel S. Gilligan

**Principals:**  
Ned Mitrovich, P.E.  
Jason E. Stanton, P.E.  
Kevin A. Brett, P.E.

June 14, 2018

S. O. No. 0493-04-08

**VIA E-MAIL AND U.S. MAIL**

Ms. Erin Sakalik, Manager  
Mount Pleasant Township  
31 McCarrell Road  
Hickory, PA 15340

**Subject: Falcon Ethane Pipeline System  
Shell Pipeline Company**

Dear Ms. Sakalik:

We have completed our review of the above referenced Post-Construction Stormwater Management Plan and Site Restoration Plan, dated December 5, 2017, as prepared by AECOM. The plan proposes the installation of a 12" diameter steel gas pipeline. The project traverses the eastern portion of Mount Pleasant Township extending into Chartiers Township and Robinson Township.

The applicant has requested review for consistency with the Township Stormwater Management Ordinance. As submitted, the plan proposes restoration of disturbed areas to predevelopment conditions and does not propose construction of impervious surface within Mount Pleasant Township. As such, the plan, as proposed will conform with the requirements of the Township Stormwater Management Ordinance with issuance of the projects Chapter 105 and ESCGP-2 Permitting.

It is noted that the plan proposes crossing Township roadway rights-of-way for construction of the proposed pipeline. The applicant should file a Road Encroachment Permit Application with the Township for each proposed crossing.

Should you have any questions, please call.

Sincerely,

Kevin A. Brett, P.E.

Shawn R. Wingrove, E.I.T.

KAB/SRW:ven

cc: Thomas McDermott, Esquire  
AECOM

## **Requirement P**

### Floodplain Management Analysis and Consistency Letter



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**FLOODPLAIN MANAGEMENT ANALYSIS AND CONSISTENCY LETTER**

A Floodplain Management Analysis may be required if the proposed water obstruction or encroachment is within a floodway delineated on a FEMA map. The Proposed project is located within Chartiers, Mount Pleasant, and Robinson townships, Washington County, PA. According to FEMA mapping, the Project occurs within the 100-Year Flood Zone A for Westland Run in Chartiers Township, a UNT to Millers Run in Mount Pleasant Township, and Robinson Run in Mount Pleasant and Robinson townships. No permanent above ground structures are to be installed within this FEMA identified area; therefore, no Floodplain Management Analysis is required. However, per PADEP request, letters were sent to the floodplain managers in each township. These letters are enclosed.

**From:** TrackingUpdates@fedex.com  
**Sent:** Friday, August 10, 2018 3:00 PM  
**To:** Shearer, Natalie  
**Subject:** FedEx Shipment 772913972018 Delivered

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This tracking update has been requested by:

Company Name: AECOM  
Name: Natalie L. Shearer  
E-mail: [natalie.shearer@aecom.com](mailto:natalie.shearer@aecom.com)

---

Our records indicate that the following shipment has been delivered:

Invoice number: 70.12  
Purchase order number: 60536988  
Reference: 39940622.54210.50000  
Ship date: Aug 9, 2018  
Signed for by: B.SMALL  
Delivery location: HOUSTON, PA  
Delivered to: Shipping/Receiving  
Delivery date: Fri, 8/10/2018 2:57 pm  
Service type: FedEx Standard Overnight®  
Packaging type: FedEx® Envelope  
Number of pieces: 1  
Weight: 0.50 lb.  
Special handling/Services: Deliver Weekday  
Standard transit: 8/10/2018 by 3:00 pm  
  
Tracking number: 772913972018

Shipper Information	Recipient Information
Natalie L. Shearer	Floodplain Manager
AECOM	Chartiers Township
681 Andersen Drive, Suite 400	2 Buccaneer Drive
Foster Plaza 6	HOUSTON
Pittsburgh	PA
PA	US
US	15342
15220	

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Thank you for your business.

August 9, 2018

CHARTIERS TOWNSHIP  
FLOODPLAIN MANAGER  
2 BUCANEER DRIVE  
HOUSTON, PA 15342

**Municipal Floodplain Management Analysis  
Falcon Ethane Pipeline System  
Washington County, Pennsylvania**

Dear Sir or Madam:

Shell Pipeline Company LP (SPLC) proposes to build, own, and operate the Falcon Ethane Pipeline System (Project). The Project will consist of an approximately 98-mile common carrier ethane supply pipeline that will be located in southwestern Pennsylvania, Ohio, and West Virginia. The Project will connect three major ethane sources in Houston, Pennsylvania, Scio, Ohio, and Cadiz, Ohio to Shell Chemical's planned Pennsylvania Petrochemical Plant (Plant) located in Monaca, Pennsylvania.

The Project will consist of the following:

- An approximately eleven (11) mile 10-inch diameter steel pipeline that will run from the existing MarkWest Cadiz, Ohio facility to a junction point located two miles southeast of Scio, Ohio.
- An approximately fifty-three (53)-mile 12-inch diameter steel pipeline will stretch from the Utica East Ohio plant in Scio, Ohio to a junction site located four miles southwest of the Monaca, Pennsylvania Petrochemical plant.
- A third 12-inch diameter steel pipeline will originate out of MarkWest's Houston, Pennsylvania fractionation plant and stretch to the junction site that is located four (4) miles southwest of Monaca.
- A 16-inch diameter steel pipeline will stretch approximately (4) four miles from that junction site to the Plant in Monaca, Pennsylvania.

This letter is specific to those activities occurring within Chartiers Township as it relates to Federal Emergency Management Agency (FEMA) Special Flood Hazard Areas (SFHA) which are also considered the 100-year floodplain. The 100-year floodplain is the land area covered by the floodwaters of the 100-year flood.

AECOM has completed an analysis of potential impacts to the FEMA SFHAs from the Project in accordance with 25 Pa. Code § 105.13, including, *inter alia*, a visual review of FEMA SFHAs in relation to the planned construction activities. A summary of the proposed impacts related to Chartiers Township is provided below for your review and comment.

FALCON ETHANE PIPELINE SYSTEM FEMA FLOODPLAIN CROSSINGS CHARTIERS TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA								
Description of Impact	Structure Type	Resource ID	Resource Name	FEMA Special Flood Hazard Area Designation	Impact Area (acres)		Latitude	Longitude
					Permanent	Temporary		
Pipeline Crossing	Equipment access and E&S controls	S-PA-160406-MRK-002 Crossing #1	Westland Run	Zone A	0	0.341	40.263391	-80.266315
Pipeline Crossing	Equipment access and E&S controls	S-PA-160406-MRK-002 Crossing #2	Westland Run	Zone A	0	0.488	40.271898	-80.269415

The SFHA crossings listed above are depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that based on AECOM's analysis, construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity since the pre-construction surface elevations will be re-established following construction. The temporary and permanent impacts noted above are associated with vegetation management resulting from underground pipe installation only, and do not represent a permanent ground elevation modification or flood storage or hydraulic capacity loss. No permanent aboveground structures or fill are proposed within the FEMA 100-year floodplain and therefore, no increases in 100-year flood elevation are anticipated as a result of temporary impacts for construction activities to install the pipeline. Pipeline construction across waterbodies will be performed in accordance with applicable PADEP Chapter 105 and 102 permit conditions, and SPLC's approved Soil Erosion Sediment Control (SESC) Plan. The proposed crossing will be restored to preconstruction contours and revegetated within disturbed riparian areas.

On behalf of SPLC, AECOM respectfully requests that Chartiers Township review this analysis with respect to your municipality's respective floodplain management codes and ordinances and, if applicable, provide comments to:

Natalie L. Shearer, M.S., QEP  
AECOM  
Foster Plaza 6  
681 Andersen Drive, Suite 400  
Pittsburgh, PA 15220

**Please do not send comments directly to the PADEP**, as SPLC must include them with their permit application. Should you have any questions or concerns regarding this request, please contact Natalie Shearer at (412)-503-4595 or via email at natalie.shearer@aecom.com.

Yours sincerely,



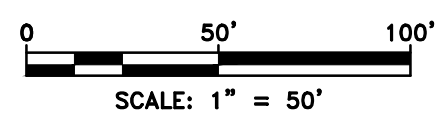
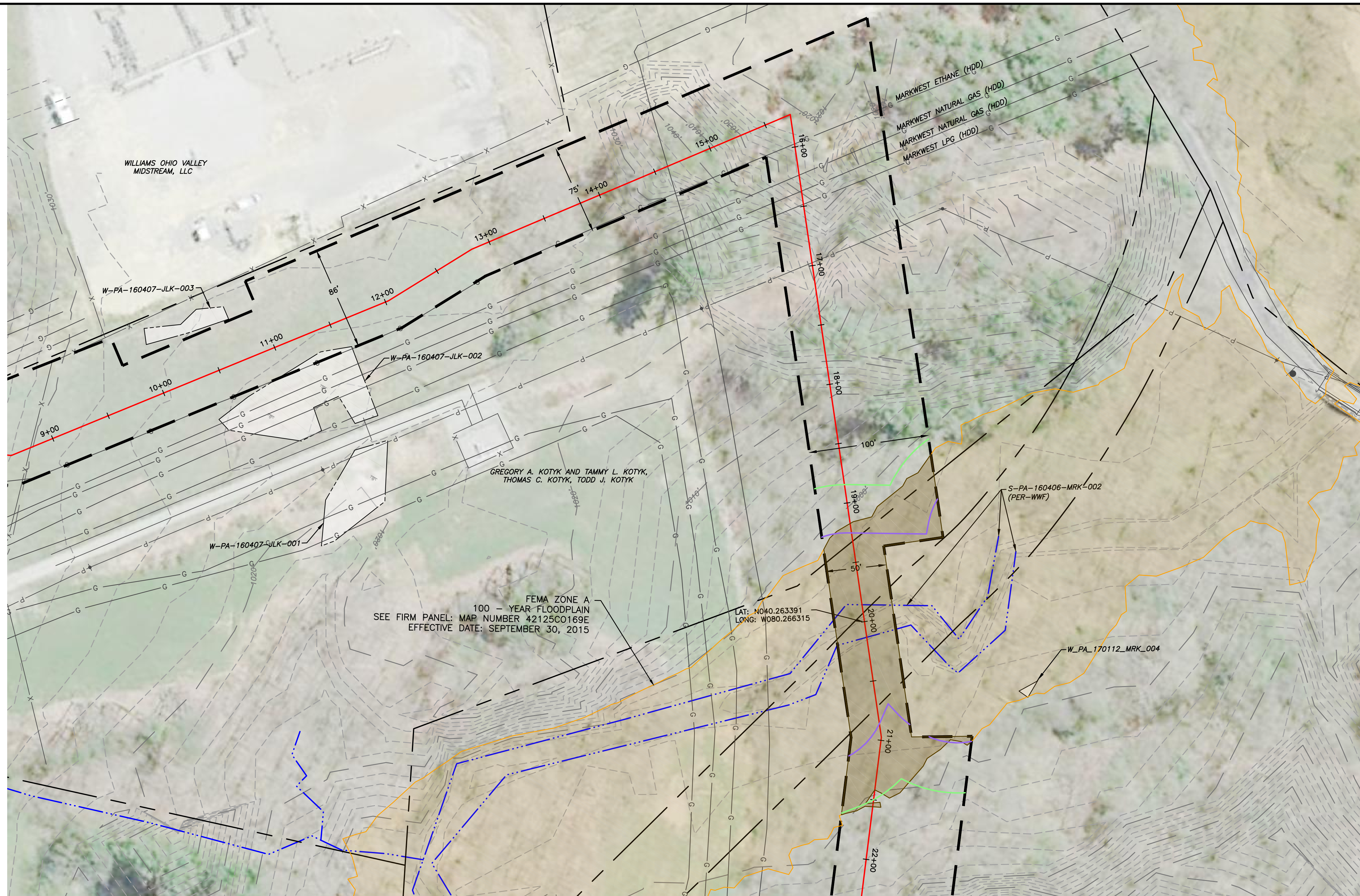
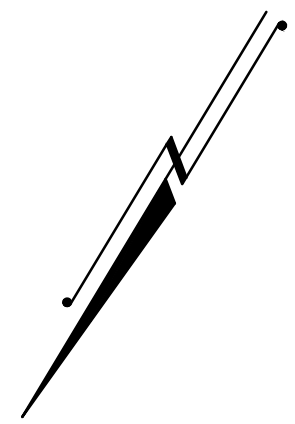
Natalie L. Shearer, M.S., QEP  
Senior Ecologist  
AECOM  
T: 412-503-4595  
M: 412-694-8971  
E: natalie.shearer@aecom.com



Brandon M. Walker, PE  
Project Manager  
AECOM  
T: 412-503-4554  
M: 412-522-9566  
E: brandon.walker@aecom.com

**enclosures:** Erosion and Sediment Control Plan Drawing(s)

**cc:** Doug Scott, PE, SPLC Project Manager  
Robert Wooten, SPLC Land and Permitting Manager



REFERENCES:

1. FLOODPLAIN SPECIAL FLOOD HAZARD AREA OBTAINED FROM NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)
2. TOPOGRAPHIC SURVEY DATA PROVIDED BY PERCHERON LLC, 2016-2017
3. WETLAND INVESTIGATION WAS COMPLETED BY AECOM FROM FEBRUARY 2016 TO MAY 2017

IMPACT AREA (ACRES)	
PERMANENT	TEMPORARY
0	0.341

File name: \\projects\1747\shelly\40488885 - FALCON\000-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\FLOODPLAIN CROSSINGS\FC\_PLAN002.DWG  
 Last saved by: TOSHIAKI WAKINNEY (6/8/2018 2:14 PM) Last Plotted: 2018-08-08 (6/8/2018 4:42 PM)

- |  |                               |
|--|-------------------------------|
| EXISTING CONTOURS (INDEX)                    | PROPOSED PIPELINE             |
| EXISTING CONTOURS (INTERMEDIATE)             | PROPOSED LIMIT OF DISTURBANCE |
| EXISTING PROPERTY LINE                       | ACCESS ROAD CENTERLINE        |
| EXISTING STREAM                              | WATERSHED BOUNDARY            |
| EXISTING WETLAND                             | FLOODPLAIN                    |
| SOIL TYPE BOUNDARY AND SOIL BOUNDARY         | FLOODPLAIN IMPACT             |
| LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY |                               |
| TREE/BRUSH LINE                              |                               |

GENERAL NOTES:

REV NO	DATE	DESCRIPTION OF REVISION	CHK	APP

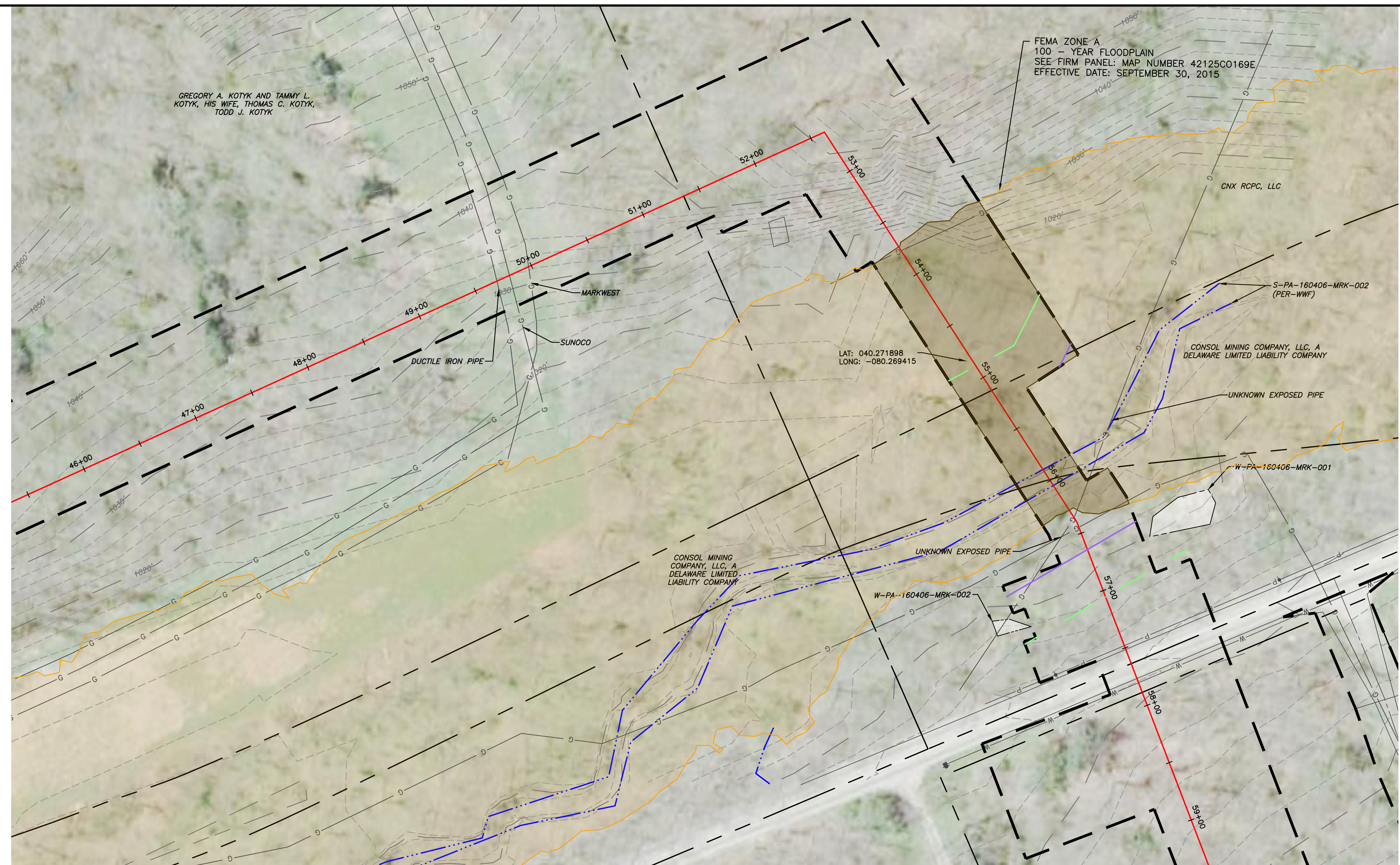
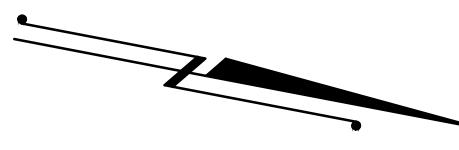
FALCON ETHANE PIPELINE SYSTEM  
HOUSTON TO JUNCTION

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FLOODPLAIN MAP 01 WESTLAND RUN #1		PENNSYLVANIA	
WASHINGTON COUNTY CHARTIERS TOWNSHIP		SCALE 1"=50'	DATE 08/07/18
DRAWN TLM	SPLC-GOM-AE-SD120080	REVISION 0	

GREGORY A. KOTYK AND TAMMY L. KOTYK, HIS WIFE, THOMAS C. KOTYK, TODD J. KOTYK

FEMA ZONE A  
100 - YEAR FLOODPLAIN  
SEE FIRM PANEL: MAP NUMBER 42125C0169E  
EFFECTIVE DATE: SEPTEMBER 30, 2015



IMPACT AREA (ACRES)	
PERMANENT	TEMPORARY
0	0.488

REFERENCES:

1. FLOODPLAIN SPECIAL FLOOD HAZARD AREA OBTAINED FROM NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)
2. TOPOGRAPHIC SURVEY DATA PROVIDED BY PERCHERON LLC, 2016-2017
3. WETLAND INVESTIGATION WAS COMPLETED BY AECOM FROM FEBRUARY 2016 TO MAY 2017

File name: \\projects\1747\shelly\4048885 - FALCON\000-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\FLOODPLAIN CROSSINGS\FC\_PLAN005.DWG  
 Last saved by: TOSHIMAKIYAMA (6/8/2018 4:14 PM) Last Plotted: 2018-08-08 (6/8/2018 4:43 PM)

	EXISTING CONTOURS (INDEX)		PROPOSED PIPELINE
	EXISTING CONTOURS (INTERMEDIATE)		PROPOSED LIMIT OF DISTURBANCE
	EXISTING PROPERTY LINE		ACCESS ROAD CENTERLINE
	EXISTING STREAM		WATERSHED BOUNDARY
	EXISTING WETLAND		FLOODPLAIN
	SOIL TYPE BOUNDARY AND SOIL BOUNDARY		FLOODPLAIN IMPACT
	LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY		
	TREE/BRUSH LINE		

GENERAL NOTES:					
REV NO	DATE	DESCRIPTION OF REVISION	CHK	APP	

<b>FALCON ETHANE PIPELINE SYSTEM</b>		<b>FLOODPLAIN MAP 02</b>	
<b>HOUSTON TO JUNCTION</b>		<b>WESTLAND RUN #2</b>	
WASHINGTON COUNTY		PENNSYLVANIA	
CHARTIERS TOWNSHIP			
<small>THIS DOCUMENT IS CONFIDENTIAL AND IT SHALL NOT BE REPRODUCED OR REDISTRIBUTED WITHOUT PRIOR PERMISSION. NEITHER THE OPERATOR NOR THE OWNER MAKE ANY WARRANTY AS TO THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION CONTAINED ON THIS DRAWING, AND THE USER ASSUMES ALL RISK OF LOSS TO PERSONS AND PROPERTY AS A RESULT OF RELIANCE THEREON.</small>		<small>SCALE: 1"=50'</small> <small>DRAWN: TLM</small>	<small>DATE: 08/07/18</small> <small>SPLC-GOM-AE-SD120081</small> <small>REVISION: 0</small>



**From:** TrackingUpdates@fedex.com  
**Sent:** Friday, August 10, 2018 2:26 PM  
**To:** Shearer, Natalie  
**Subject:** FedEx Shipment 772914582139 Delivered

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This tracking update has been requested by:

Company Name: AECOM  
Name: Natalie L. Shearer  
E-mail: [natalie.shearer@aecom.com](mailto:natalie.shearer@aecom.com)

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Our records indicate that the following shipment has been delivered:

Invoice number: 70.12  
Purchase order number: 60536988  
Reference: 39940622.54210.50000  
Ship date: Aug 9, 2018  
Signed for by: J.MCQUILLAN  
Delivery location: HICKORY, PA  
Delivered to: Receptionist/Front Desk  
Delivery date: Fri, 8/10/2018 2:24 pm  
Service type: FedEx Standard Overnight®  
Packaging type: FedEx® Envelope  
Number of pieces: 1  
Weight: 0.50 lb.  
Special handling/Services: Deliver Weekday  
Standard transit: 8/10/2018 by 3:00 pm  
  
Tracking number: 772914582139

Shipper Information	Recipient Information
Natalie L. Shearer	Floodplain Manager
AECOM	Mount Pleasant Township
681 Andersen Drive, Suite 400	31 McCarrell Rd
Foster Plaza 6	HICKORY
Pittsburgh	PA
PA	US
US	15340
15220	

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Thank you for your business.

August 9, 2018

MT PLEASANT TOWNSHIP  
FLOODPLAIN MANAGER  
31 MCCARRELL ROAD  
HICKORY, PA 15340

**Municipal Floodplain Management Analysis  
Falcon Ethane Pipeline System  
Washington County, Pennsylvania**

Dear Sir or Madam:

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Description of Impact	Structure Type	Resource ID	Resource Name	FEMA Special Flood Hazard Area Designation	Impact area (acres)		Latitude	Longitude
					Permanent	Temporary		
Temporary Access Road	Equipment access and E&S controls	S-PA-160314-NLS-002B	UNT to Millers Run	Zone A	0	0.018	40.334268	-80.257372
Temporary Access Road	Equipment access and E&S controls	S-PA-160323-NLS-002	Robinson Run	Zone A	0	0.053	40.361447	-80.274866

The SFHA crossings listed above are depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that based on AECOM's analysis, construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity since the pre-construction surface elevations will be re-established following construction. The temporary and permanent impacts noted above are associated with vegetation management resulting from underground pipe installation only, and do not represent a permanent ground elevation modification or flood storage or hydraulic capacity loss. No permanent aboveground structures or fill are proposed within the FEMA 100-year floodplain and therefore, no increases in 100-year flood elevation are anticipated as a result of temporary impacts for construction activities to install the pipeline. Pipeline construction across waterbodies will be performed in accordance with applicable PADEP Chapter 105 and 102 permit conditions, and SPLC's approved Soil Erosion Sediment Control (SESC) Plan. The proposed crossing will be restored to preconstruction contours and revegetated within disturbed riparian areas.

On behalf of SPLC, AECOM respectfully requests that Mt. Pleasant Township review this analysis with respect to your municipality's respective floodplain management codes and ordinances and, if applicable, provide comments to:

Natalie L. Shearer, M.S., QEP  
AECOM  
Foster Plaza 6  
681 Andersen Drive, Suite 400  
Pittsburgh, PA 15220

**Please do not send comments directly to the PADEP**, as SPLC must include them with their permit application. Should you have any questions or concerns regarding this request, please contact Natalie Shearer at (412)-503-4595 or via email at natalie.shearer@aecom.com.

Yours sincerely,



Natalie L. Shearer, M.S., QEP  
Senior Ecologist  
AECOM  
T: 412-503-4595  
M: 412-694-8971  
E: natalie.shearer@aecom.com



Brandon M. Walker, PE  
Project Manager  
AECOM  
T: 412-503-4554  
M: 412-522-9566  
E: brandon.walker@aecom.com

**enclosures:** Erosion and Sediment Control Plan Drawing(s)

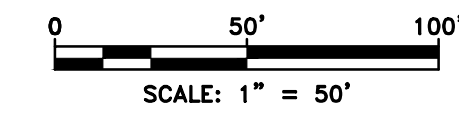
**cc:** Doug Scott, PE, SPLC Project Manager  
Robert Wooten, SPLC Land and Permitting Manager



File name: \\projects\1747\shelly\40488888 - FALCON\000-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\FLOODPLAIN CROSSINGS\FC\_PLANDA1.DWG  
 Last saved by: TOSHIMAKIYAMA (6/8/2018 4:15 PM) Last Plotted: 2018-08-08 14:38 PM



FEMA ZONE A  
 100 - YEAR FLOODPLAIN  
 SEE FIRM PANEL: MAP NUMBER 42125C0160E  
 EFFECTIVE DATE: SEPTEMBER 30, 2015



**REFERENCES:**

1. FLOODPLAIN SPECIAL FLOOD HAZARD AREA OBTAINED FROM NATIONAL FLOOD HAZARD LAYER, FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)
2. TOPOGRAPHIC SURVEY DATA PROVIDED BY PERCHERON LLC, 2016-2017
3. WETLAND INVESTIGATION WAS COMPLETED BY AECOM FROM FEBRUARY 2016 TO MAY 2017

IMPACT AREA (ACRES)	
MOUNT PLEASANT TOWNSHIP	
PERMANENT	TEMPORARY
0	0.053
ROBINSON TOWNSHIP	
PERMANENT	TEMPORARY
0	0.011

1,550	EXISTING CONTOURS (INDEX)		PROPOSED PIPELINE
	EXISTING CONTOURS (INTERMEDIATE)		PROPOSED LIMIT OF DISTURBANCE
	EXISTING PROPERTY LINE		ACCESS ROAD CENTERLINE
	EXISTING STREAM		WATERSHED BOUNDARY
	EXISTING WETLAND		FLOODPLAIN
	SOIL TYPE BOUNDARY AND SOIL BOUNDARY		FLOODPLAIN IMPACT
	LAND USE TYPE BOUNDARY AND LAND USE BOUNDARY		
	TREE/BRUSH LINE		

GENERAL NOTES:

REV NO	DATE	DESCRIPTION OF REVISION	CHK	APP

<b>FALCON ETHANE PIPELINE SYSTEM</b>		<b>FLOODPLAIN MAP 04</b>	
<b>HOUSTON TO JUNCTION</b>		<b>ROBINSON RUN</b>	
WASHINGTON COUNTY		PENNSYLVANIA	
MOUNT PLEASANT & ROBINSON TOWNSHIP		SPLC-GOM-AE-SD120083	
SCALE: 1"=50'	DATE: 08/07/18	DRAWN: TLM	REVISION: 0

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**From:** TrackingUpdates@fedex.com  
**Sent:** Friday, August 10, 2018 10:49 AM  
**To:** Shearer, Natalie  
**Subject:** FedEx Shipment 772914786438 Delivered

---

This tracking update has been requested by:

Company Name: AECOM  
Name: Natalie L. Shearer  
E-mail: [natalie.shearer@aecom.com](mailto:natalie.shearer@aecom.com)

---

Our records indicate that the following shipment has been delivered:

Invoice number: 70.12  
Purchase order number: 60536988  
Reference: 39940622.54210.50000  
Ship date: Aug 9, 2018  
Signed for by: L.INDA  
Delivery location: MCDONALD, PA  
Delivered to: Receptionist/Front Desk  
Delivery date: Fri, 8/10/2018 10:47 am  
Service type: FedEx Standard Overnight®  
Packaging type: FedEx® Envelope  
Number of pieces: 1  
Weight: 0.50 lb.  
Special handling/Services: Deliver Weekday  
Standard transit: 8/10/2018 by 3:00 pm  
  
Tracking number: 772914786438

Shipper Information	Recipient Information
Natalie L. Shearer	Floodplain Manager
AECOM	Robinson Township
681 Andersen Drive, Suite 400	8400 Noblestown Road
Foster Plaza 6	MCDONALD
Pittsburgh	PA
PA	US
US	15057
15220	



Please do not respond to this message. This email was sent from an unattended mailbox. This report was generated at approximately 9:49 AM CDT on 08/10/2018.

All weights are estimated.

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<https://www.fedex.com/apps/fedextrack/?action=track&tracknumbers=772914786438&language=en&opco=FX&clientype=ivothor>

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.

August 9, 2018

ROBINSON TOWNSHIP  
FLOODPLAIN MANAGER  
8400 NOBLESTOWN ROAD  
MCDONALD, PA 15057

**Municipal Floodplain Management Analysis  
Falcon Ethane Pipeline System  
Washington County, Pennsylvania**

Dear Sir or Madam:

Shell Pipeline Company LP (SPLC) proposes to build, own, and operate the Falcon Ethane Pipeline System (Project). The Project will consist of an approximately 98-mile common carrier ethane supply pipeline that will be located in southwestern Pennsylvania, Ohio, and West Virginia. The Project will connect three major ethane sources in Houston, Pennsylvania, Scio, Ohio, and Cadiz, Ohio to Shell Chemical's planned Pennsylvania Petrochemical Plant (Plant) located in Monaca, Pennsylvania.

The Project will consist of the following:

- An approximately eleven (11) mile 10-inch diameter steel pipeline that will run from the existing MarkWest Cadiz, Ohio facility to a junction point located two miles southeast of Scio, Ohio.
- An approximately fifty-three (53)-mile 12-inch diameter steel pipeline will stretch from the Utica East Ohio plant in Scio, Ohio to a junction site located four miles southwest of the Monaca, Pennsylvania Petrochemical plant.
- A third 12-inch diameter steel pipeline will originate out of MarkWest's Houston, Pennsylvania fractionation plant and stretch to the junction site that is located four (4) miles southwest of Monaca.
- A 16-inch diameter steel pipeline will stretch approximately (4) four miles from that junction site to the Plant in Monaca, Pennsylvania.

This letter is specific to those activities occurring within Robinson Township as it relates to Federal Emergency Management Agency (FEMA) Special Flood Hazard Areas (SFHA) which are also consider the 100-year floodplain. The 100-year floodplain is the land area covered by the floodwaters of the 100-year flood.

AECOM has completed an analysis of potential impacts to the FEMA SFHAs from the Project in accordance with 25 Pa. Code § 105.13, including, *inter alia*, a visual review of FEMA SFHAs in relation to the planned construction activities. A summary of the proposed impacts related to Robinson Township is provided below for your review and comment.

<b>FALCON ETHANE PIPELINE SYSTEM FEMA FLOODPLAIN CROSSINGS ROBINSON TOWNSHIP, WASHINGTON COUNTY, PENNSYLVANIA</b>								
Description of Impact	Structure Type	Resource ID	Resource Name	FEMA Special Flood Hazard Area Designation	Impact area (acres)		Latitude	Longitude
					Permanent	Temporary		
Temporary Access Road	Equipment access and E&S controls	S-PA-160323-NLS-002	Robinson Run	Zone A	0	0.011	40.361598	-80.274792

The SFHA crossings listed above are depicted on the enclosed plans from the Project's PADEP Chapter 105 Permit Application.

Please note that based on AECOM's analysis, construction activities are not expected to create permanent loss of flood storage capacity or hydraulic capacity since the pre-construction surface elevations will be re-established following construction. The temporary and permanent impacts noted above are associated with vegetation management resulting from underground pipe installation only, and do not represent a permanent ground elevation modification or flood storage or hydraulic capacity loss. No permanent aboveground structures or fill are proposed within the FEMA 100-year floodplain and therefore, no increases in 100-year flood elevation are anticipated as a result of temporary impacts for construction activities to install the pipeline. Pipeline construction across waterbodies will be performed in accordance with applicable PADEP Chapter 105 and 102 permit conditions, and SPLC's approved Soil Erosion Sediment Control (SESC) Plan. The proposed crossing will be restored to preconstruction contours and revegetated within disturbed riparian areas.

On behalf of SPLC, AECOM respectfully requests that Robinson Township review this analysis with respect to your municipality's respective floodplain management codes and ordinances and, if applicable, provide comments to:

Natalie L. Shearer, M.S., QEP  
AECOM  
Foster Plaza 6  
681 Andersen Drive, Suite 400  
Pittsburgh, PA 15220

**Please do not send comments directly to the PADEP**, as SPLC must include them with their permit application. Should you have any questions or concerns regarding this request, please contact Natalie Shearer at (412)-503-4595 or via email at [natalie.shearer@aecom.com](mailto:natalie.shearer@aecom.com).

Yours sincerely,



Natalie L. Shearer, M.S., QEP  
Senior Ecologist  
AECOM  
T: 412-503-4595  
M: 412-694-8971  
E: [natalie.shearer@aecom.com](mailto:natalie.shearer@aecom.com)



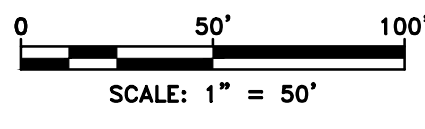
Brandon M. Walker, PE  
Project Manager  
AECOM  
T: 412-503-4554  
M: 412-522-9566  
E: [brandon.walker@aecom.com](mailto:brandon.walker@aecom.com)

**enclosures:** Erosion and Sediment Control Plan Drawing(s)

**cc:** Doug Scott, PE, SPLC Project Manager  
Robert Wooten, SPLC Land and Permitting Manager



FEMA ZONE A  
100 - YEAR FLOODPLAIN  
SEE FIRM PANEL: MAP NUMBER 42125C0160E  
EFFECTIVE DATE: SEPTEMBER 30, 2015



**REFERENCES:**

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File name: \\projects\1747\shelly\40488888 - FALCON\000-WORK\911-ENVIRONMENTAL\20-SHEETS\PENNSYLVANIA\FLOODPLAIN CROSSINGS\FC\_PLANDA1.DWG  
 Last saved by: TOSHIMAKIYAMA (6/8/2018 4:15 PM) Last Plotted: 2018-08-08 (6/8/2018 4:43 PM)

**Requirement Q**  
Risk Assessment

### **Risk Assessment**

Proper Best Management Practices will be followed during construction to reduce or eliminate issues associated with flooding and sedimentation. The floodplain management analysis did not indicate any degree of increased risk to life, property, or the environment. As a result, the engineers determined that a risk assessment was not necessary for this Project.

## **Requirement R**

### Professional Engineer's Seal and Certification



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**PROFESSIONAL ENGINEER'S SEAL AND CERTIFICATION**

I, Andrew R. Gullone, do hereby certify pursuant to the penalties of 18 Pa. C.S.A., Section 4904 to the best of my knowledge, information and belief, that the information contained in the accompanying plans, specifications and reports has been prepared in accordance with accepted engineering practice, is true and correct, and is in conformance with Chapter 105 of the rules and regulations of the Department of Environmental Protection.

The proposed Falcon Ethane Pipeline System within Washington County, Pennsylvania involves no permanent water obstructions or encroachments. Temporary impacts are to be limited to stream and wetland crossings of duration only long enough to allow pipeline construction. All wetlands and waterways are to be restored to original contours and land cover to the extent feasible.

Engineer Name (typed): Andrew R. Gullone

Registration Number: PE 078979

Signature: 

Date: 18-DEC-2018

