

December 4, 2017

Berks County Conservation District Attn: Mr. Dean Druckenmiller 1238 County Welfare Road, Suite 200 Leesport, PA 19533

Re: Natural Gas Combined Cycle Minor Modification

**Electric Transmission Line and Storm Outfalls Rehabilitation** 

NPDES Permit #: PAC060046 BCCD Project ID #: ESP-00731 Dawood Project No. 216040.01

Enclosed, please find revised documents for the above-referenced project updated to accommodate the installation of poles required to connect the substation to the existing overhead line north of the substation site off Boonetown Road. These documents have been revised to adjust the limit of disturbance, show E&S control for the additional area, and demonstrate that the 2-year volume increase associated with the two pole foundations does not exceed the predevelopment volume for the site.

In addition to the revised plans, a check is enclosed in the amount of \$200.00 payable to the Berks County Conservation District to cover the minor modification fee.

The following is a summary of all plan changes:

- 1. ESCP B116 (Page 416)— Total Disturbed area has been increased by 5,302 SF to allow installation of connection poles. Additional 18" silt sock is included for the disturbed area.
- 2. Substation Pre-Construction Map (Page 71) Total Disturbed area has been increased by 5,302 SF to allow installation of connection poles.
- 3. Substation Post-Construction Map (Page 72) Total Disturbed area has been increased by 5,302 SF to allow installation of connection poles.
- 4. Substation point of interest NPDES WS 4 (Page 109) Total 2-year volume increase adjusted with additional disturbed area and impervious area associated with pole foundations.
- 5. Substation point of interest NPDES WS 5 (Page 110) Demonstration that Post-development 2-year volume is reduced from Pre-development condition.
- ESCP B102 (Page 401)

   Total Disturbed area has been decreased to from a 150' wide limit of disturbance to a 100' wide limit of disturbance on the Pennsylvania Lines, LLC Parcel (43533517110860) based on comments received from Chapter 105 review.

- 7. ESCP B103 (Page 402)— Total Disturbed area has been decreased to from a 150' wide maximum limit of disturbance to a 100' wide maximum limit of disturbance from station 23+00 to 24+50 based on comments received from Chapter 105 review.
- 8. ESCP B106 (Page 405)— Total Disturbed area has been decreased to from a 115' wide limit of disturbance to a 90' wide limit of disturbance from station 61+00 to 65+00 based on comments received from Chapter 105 review.

We greatly appreciate your cooperation in coordinating the NPDES permitting process for this project. If you have any questions regarding this submission, please do not hesitate to contact me at (724) 746-0730 ext. 1306 or by email to jpisula@dawood.cc.



- MODIFCATION\REVISIONS BEGINNING 3.29.2017\REVISE FOR BOYERS UPDATES\REVISED 216040-LDE-FL-STRM

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## Worksheet 4. Change in Runoff Volume for 2-YR Storm Event

PROJECT: Birdsboro Transmission Line

Drainage Area:Substation POI2-Year Rainfall:3.21
in

7.35

Total Site Area: $\frac{7.23}{}$  acresProtected Site Area:0acresManaged Area: $\frac{7.23}{}$  acres

## **Existing Conditions:**

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	la (0.2*S)	Q Runoff <sup>1</sup> (in)	Runoff Volume <sup>2</sup> (ft <sup>3</sup> )
Meadow	C/D	22,038 298,085	0.51	78	2.82	0.56	1.28	2,351
Meadow	В	<del>292,783</del>	6.84 <del>-6.72</del>	58	7.24	1.45	0.34	8,446 <del>8,296</del>
Impervious	В	0	0	98	0.2	0.04	2.98	0
TOTAL:		320,123 <del>314,821</del>	7.35 <del>7.23</del>					10,797 <del>10,647</del>

# **Developed Conditions**

Cover Type/Condition	Soil Type	Area (sf)	Area (ac)	CN	S	la (0.2*S)	Q Runoff <sup>1</sup> (in)	Runoff Volume <sup>2</sup> (ft <sup>3</sup> )
Meadow	В	<del>216,993</del> 222,168	<del>4.98</del> 5.10	58	7.24	1.45	0.34	<del>-6,148</del> 6,295
Meadow	C/D	22,038	0.51	78	2.82	0.56	1.28	2,351
Impervious	В	<del>14,069</del> 14,196	0.32	98	0.20	0.04	2.98	<del>3,494</del> 3,525
Gravel	В	61,721	1.42	85	1.76	0.35	1.77	9,104
TOTAL:		320,123 <del>314,821</del>	7.35 <del>7.23</del>					21,275 <del>21,097</del>

10,478

2-Year Volume Increase (ft3): <del>10,450</del>

## 2-Year Volume Increase = Developed Conditions Runoff Volume – Existing Conditions Runoff Volume

1. Runoff (in) = Q =  $(P-0.2S)^2 / (P+0.8S)$  where P = 2-Year Rainfall (in)

S = (1000/CN)-10

2. Runoff Volume (CF) = Q x Area x 1/12

Q = Runoff (in)

Area = Land use area (sq. ft)

Note: Runoff Volume must be calculated for EACH land use type/condition and HSGI. The use of a weighted CN value for volume calculations is not acceptable.

## Worksheet 5. Structural BMP Volume Credits

PROJECT: Birdsboro Transmission Line

SUB-BASIN: Substation POI

Required Control Volume (ft³) – from Worksheet 4: 10,450 10,478

Non-structural Volume Credit (ft³) – from Worksheet 3:

(maximum is 25% of required volume)

Structural Volume Reqmt (ft<sup>3</sup>) 10,478

(Required Control Volume minus Non-structural Credit)

Proposed BMF	Ps from PA Stormwater Best Management Practices Manual Chapter 6	Area (ft²)	Volume Reduction Permanently Removed (ft <sup>3</sup> )
6.4.1	Porous Pavement	` '	` ′
6.4.2	Infiltration Basin		
6.4.3	Infiltration Bed		
6.4.4	Infiltration Trench		
6.4.5	Rain Garden/Bioretention	23,389	11,695
6.4.6	Dry Well / Seepage Pit		
6.4.7	Constructed Filter		
6.4.8	Vegetated Swale		
6.4.9	Vegetated Filter Strip		
6.4.10	Berm		
6.5.1	Vegetated Roof		
6.5.2	Capture and Re-use		
6.6.1	Constructed Wetlands		
6.6.2	Wet Pond / Retention Basin		
6.7.1	Riparian Buffer/Riparian Forest Buffer Restoration		
6.7.2	Landscape Restoration / Reforestation		
6.7.3	Soil Amendment		
6.8.1	Level Spreader		
6.8.2	Special Storage Areas		
Other			

Total Structural Volume (ft³): 11,695

Structural Volume Requirement (ft<sup>3</sup>): 10,450 10,478

**DIFFERENCE** -1,245 1,217







