



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

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Secretary of Natural Resources

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Director

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June 24, 2016

Mr. Cory Simonpietri  
Convergent Water Technologies, Inc.  
1930 Aldine Western Road  
Houston, Texas 77038

Re: Assignment of Percent Removal Efficiencies for Total Phosphorus

Dear Mr. Simonpietri,

Thank you for your submittal of the Manufactured Treatment Device (MTD) Registration Form and supporting documentation for the FocalPoint High Performance Modular Biofiltration System (HPMBS). The MTD information provided (Appendix A) was reviewed for the purpose of assigning a pollutant removal efficiency for total phosphorus (TP). This review was performed in accordance with the Guidance Memo Number 14-2009 titled "Interim Use of Stormwater Manufactured Treatment Devices (MTDs) to meet the new Virginia Stormwater Management Program (VSMP) Technical Criteria, Part IIB Water Quality Design Requirements". The review process included the analysis of the documents submitted and any other publically available reports.

The documents submitted provided descriptive information about the HPMBS. The data provided within the contents of the submitted performance study included drainage area size and land cover, storm event and runoff parameters, event mean concentrations (EMC) of selected nutrients and sediment, and performance results. The performance data received was analyzed by calculating the removal efficiencies for each storm event sampled for TP and then computing the mean of the removal efficiencies for that study period. This method of analysis was applied to all data received in order to achieve a consistent analytical process to aid in the assigning of removal efficiencies. A summary of the results is provided in Appendix B.

Consistent with Guidance Memo Number 14-2009, HPMBS is receiving an EMC percent TP removal efficiency of 50%. As stated in the guidance memo, this information will be posted on the Virginia Stormwater Clearinghouse website. This MTD and the assigned removal efficiency can be manually added into Virginia Runoff Reduction spreadsheet to demonstrate compliance with Runoff Reduction Method.

If you have any questions regarding this information, please contact Robert E. Cooper, P.E. at (804) 698-4033 or e-mail at [Robert.Cooper@deq.virginia.gov](mailto:Robert.Cooper@deq.virginia.gov).

Sincerely;

A handwritten signature in cursive script that reads "Fred K. Cunningham".

Fred K. Cunningham  
Director  
Office of Water Permits

## Appendix A-Document

### 1) Interim Technical Evaluation Report (TER) Field Evaluation of the Focalpoint High Performance Modular Biofiltration System

#### Appendix B-Study Results

##### Efficiency Assessment of Total Phosphorus (TP)

Storm Date	Inlet (mg/l) TP	Outlet (mg/l) TP	*Removal (%)
9/13/2015	0.0874	.0623	28.72
9/27/2015	0.121	.0978	19.17
9/30/2015	.0722	.0692	4.16
10/09/15	.253	.11	56.5
10/25/15	.0606	.0574	5.28
10/28/15	.0397	.0404	-1.76
11/6/15	.16	.125	21.88
11/10/15	.0728	.0459	36.95
12/14/15	.424	.0983	76.82
12/17/15	.181	.0693	62.82
12/22/15	.184	.0693	62.34
12/29/15	.172	.0792	53.95
01/10/16	.0501	.0562	-0.12
04/22/16	2.04	.114	94.44
04/26/16	.88	.0997	88.67
04/28/16	.631	.154	75.59
05/01/16	.536	.155	71.08
05/05/16	1.56	.096	93.85
05/11/16	1.74	.12	93.1
05/13/16	1.50	.123	91.8
			51.1**

\*Efficiency =  $100 \times (1 - \text{Effluent EMC} / \text{Influent EMC})$

\*\* Average efficiency