COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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August 28, 2014

Mr. Derek Berg
Contech Engineering Solutions LLC
71 US Route 1, Suite F
Scarborough, Maine 04074

Re: Assignment of Percent Removal Efficiencies for Total Phosphorus

Dear Mr. Berg,

Thank you for your submittal of the Manufactured Treatment Device (MTD) Registration Form and supporting documentation for the Contech StormFilter with Phosphosorb media. 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 documents submitted provided descriptive information about the Stormfilter with Phosphosorb media. The data provided within the contents of the submitted performance studies included drainage area size and land cover, storm event and runoff parameters, event mean concentrations (EMC) of TP 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, Contech StormFilter with Phosphosorb media 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

Sincerely;

Fred K. Cunningham
Director
Office of Water Permit

Appendix A-Documents

1) Phosphorus Removal in Urban Runoff Using Adsorptive Filtration Media
2) Field Verification of Performance of an Engineered Phosphorus Removal Media Deployed in a Flow Based Stormwater Filter

Appendix B-Study Results

Data from Field Verification of Performance of an Engineered Phosphorus Removal Media Deployed in a Flow Based Stormwater Filter Report

Storm Date	Influent EMC (mg/l)	Effluent EMC (mg/l)	*Discrete Removal Efficiency (%)
2/20/1012	0.141	0.104	26
2/14/2012	0.22	0.062	72
2/17/2012	0.31	0.0674	78
2/20/2012	0.163	0.0259	84
2/24/2012	0.424	0.0701	83
3/10/2012	0.14	0.049	65
3/29/2012	0.15	0.037	75
5/24/2012	0.28	0.081	71
6/1/2012	0.17	0.07	59
6/4/2012	0.2	0.035	83
6/7/2012	0.21	0.0043	98
11/6/2012	0.17	0.14	18
11/11/2012	0.068	ND	N/A
11/23/2012	0.076	ND	N/A
11/30/2012	0.082	ND	N/A
5/17/2013	0.17	ND	N/A
5/21/2013	0.282	0.03	89
6/25/2013	0.558	0.0498	91
		Mean	72

*Efficiency = 100 x (1-Effuent EMC/Influent EMC)