



# Metropolitan St. Louis Sewer District

2350 Market Street  
St. Louis, MO 63103-2555  
(314) 768-6200

February 16, 2012

David S Schuster  
A.S.P. Enterprises  
1099 Cassens Industrial Ct.  
Fenton, MO 63026

RE: Nutrient Separating Baffle Box: St. Louis MSD Submission  
Redevelopment Use Level (RUL) Approval within the District

Dear Mr. Schuster,

The Metropolitan St. Louis Sewer District has reviewed your application regarding the Nutrient Separating Baffle Box (NSBB) for use as a Best Management Practice for Stormwater Management. The District is pleased to provide Redevelopment Use Level (RUL) approval for use of the Nutrient Separating Baffle Box as a stand-alone water quality BMP, subject to the following provisions:

- The NSBB is approved for use on redevelopment sites less than 5 acres. This approval is based on compliance with requirements listed in MSD's Proprietary Water Quality Products and the MSD's Stormwater Management Program (Rev. Jan. 2009). Proprietary devices should be treated as a supplementary (rather than a primary) means of meeting small MS 4 requirements.
- The NSBB must be sized to capture all floatable trash and free oil, and remove 80% of total suspended solids for the OK-110 particle size distribution at the site water quality flow-rate (WQf). Procedures for calculating WQf are provided in Appendix D.10 of the Maryland Stormwater Design Manual (2000). Table 1 provides a list of approved models and their respective instantaneous peak treatment WQf.

Table 1: Nutrient Separating Baffle Box Approved Models and Peak WQf

NSBB Model	Treatment Flow
NSBB-2-4	0.11 cfs
NSBB-3-6	0.25 cfs
NSBB-3-8	0.33 cfs
NSBB-4-8	0.44 cfs
NSBB-5-10	0.69 cfs
NSBB-6-12	1.00 cfs
NSBB-8-14	1.56 cfs
NSBB-8-16	1.78 cfs
NSBB-10-16	2.22 cfs
NSBB-12-20	3.33 cfs

- The NSBB should be configured in an off-line layout. In most cases the BMP will not need to store the water quality volume (WQv) upstream of the unit.
- All devices shall provide a minimum sediment storage capacity of 10 cubic feet.
- All proprietary lids and covers should be captive components. The minimum size access hole is 30 inches in diameter.
- Project specific design calculations and maintenance plans furnished by Suntree Technologies must be included within the project's "Stormwater Management Facilities Report" prepared by the consulting engineer. The device's maintenance plan shall be consistent with the plans presented in Suntree Technologies' application dated February 12, 2010.
- The initial installation of the NSBB in the MSD shall include the following:
  - 1) A manufacturer's or vendor's representative must be onsite during the proprietary BMP installation to ensure the product's installation requirements are met.
  - 2) Shop drawings indicating elevations of flowlines, weirs, pipe inverts, etc. will be required prior to installation.
  - 3) The manufacturer or vendor must arrange for an as-built survey of the proprietary BMP to be performed by a Missouri-registered Professional Land Surveyor once the device has been installed, and prior to any testing or monitoring.
  - 4) Upon construction approval of the initial installation of this device the manufacturer shall prepare and submit a QAPP (Quality Assurance Performance Plan) to the BMP committee for review. At a minimum the QAPP shall address:
    - 4a) The manufacturer or vendor must perform quarterly inspections of the proprietary BMP during its' first year of operation, which will include visual inspections and quantitative analysis of the service's sediment removal efficiency, especially as compared to its design efficiency. MSD requests to be invited to these inspections to further enhance familiarity and understanding of the device.
    - 4b) Formal reports shall be submitted to MSD, including as-builts and at each quarterly inspection. The reports shall include summaries, quantitative analysis mentioned in item 4, photographs of the structure, inlet, internal conditions of the structure and outfall conditions, etc. The reports shall also evaluate the performance of the owner's adherence to the approved maintenance program, and offer suggestions for any areas of improvement.
  - 5) Upon approval of the QAPP, the manufacturer shall carry out the plan.

MSD reserves the ability to withdraw or modify this approval based on subsequent information, including information indicating that this BMP does not satisfy MSD rules, requirements, or construction specifications.

Sincerely,



Jason T. Peterein, P.E.  
Civil Engineer (BMP Committee Chairman)  
Engineering/Planning  
Metropolitan St. Louis Sewer District