November 28, 2017

Mr. Thomas H. Happel
President
Suntree Technologies Inc.
798 Clearlake Road, Suite 2
Cocoa, FL 32926

RE: Suntree Nutrient Separating Baffle Box with Hydro-Variant Technology

Dear Mr. Happel:

The City of Indianapolis (the City) Department of Public Works (DPW) has received your request for approval and information on the Nutrient Separating Baffle Box with Hydro-Variant Technology (NSBB-HVT) Stormwater Quality Units (SQUs). Suntree Technologies Inc. (Suntree) has requested the addition of the above referenced SQUs to the approved list and the City's consultant, DLZ Indiana LLC (DLZ), has completed their review of the information.

The testing information provided for the NSBB-HVT 3-6 model did appear to substantially comply with the City testing requirements. The data provided did support the NSBB-HVT can make a positive improvement on runoff water quality and approval of the units is being granted at this time.

The NSBB-HVT units are approved for use by the Marion County Stormwater Management District (District) using the standard scaling method. The approved maximum treatment flow rates are summarized for each approved unit in the table below.

Approved NSBB-HVT Units and Flow Rates

NSBB-HVT Model No.	Approved Maximum Treatment Flow Rate (cfs)	Approved Maximum 10-Year Flow Rate (cfs)
2-4	0.49	2.12
3-6	1.35	5.83
3-8	1.93	8.34
4-8	2.77	11.97
5-10	4.84	20.91
6-12	7.64	33.00
6-13.75	9.1	39.31
7-14	11.2	48.38
7-15	12.2	52.70
8-14	13.3	57.46
8-16	15.7	67.82
9-18	21.0	90.72
10-17	22.4	96.77
10-20	27.4	118.37
12-21	36.6	158.11
12-24	43.2	186.62

The flow rates provided are the approved maximum design treatment flow rates and the standard 0.3 inch Huff rainfall event, as described in the City's criteria, will be used to determine the treatment flow. Please note the units are also approved for **on-line use**. The units will be limited not only by the maximum treatment flow rate but also the maximum flow rate from a 10% (10-year) storm event.

Also, please note the City does not approve custom or altered units without review to prevent unauthorized changes. The testing information provided only included data on a single horizontal inlet pipe to the SQU. Multiple inlets must be tested and approved individually based on the specific inlet configuration. The NSBB-HVT is approved for the single horizontal inlet configuration only at this time.

While the maximum depth of sediment prior to cleanout was stated to be two (2) feet, scour testing was performed with only six (6) inches of pre-loaded sediment. The City requires scour testing with 100% of the maximum sediment depth. As a result, the approved maximum depth of sediment before cleanout will be six (6) inches until such time as additional testing data is submitted with a higher preloaded sediment depth.

The units must be designed for the anticipated traffic loading and documentation provided for each application, for both public and private projects. The units are not approved for use within traffic pavement wheel paths.

Please note this approval is subject to re-evaluation should new or revised information be obtained by the District with respect to the SQU, changes in the City of Indianapolis Manufactured Stormwater Quality Treatment System Evaluation Criteria or changes in the

water quality requirements of the District's discharge permit. As a courtesy, the District will attempt to inform you of any change in status.

The District thanks you for your interest and looks forward to the application of the Nutrient Separating Baffle Box with Hydro-Variant Technology SQUs within the District.

If you have any questions regarding this matter, please contact me at 317-327-2304 or via email at Rachel.Wilson@indy.gov.

Sincerely,

Rachel Wilson

Rachel Wilson, PE
Senior Project Manager

Cc: File