Attachment 1

Manufactured Treatment Device (MTD) Registration

1. **Manufactured Treatment Device Name: Stormceptor® and Stormceptor MAX**
2. **Company Name: Rinker Materials Stormceptor**
   Mailing Address: 1360 Old Bridge Road
   City: Woodbridge
   State: Virginia Zip: 22192

3. **Contact Name (**to whom questions should be addressed)**:** Aimee Connerton
   Mailing Address: PO Box 106
   City: Dowell
   State: Maryland Zip: 20629
   Phone number: 301-357-0324
   Fax number: 410-326-2569
   E-mail address: aimeej.connerton@cemex.com
   Web address: www.rinkerstormceptor.com

4. **Technology**
   Specific size/capacity of MTD assessed (include units):

Stormceptor Capacities			
Model	*Sediment Capacity (ft^3)	Oil Capacity (US Gal.)	Total (US Gal.)
450*i*	9	86	470
900	19	251	952
1200	25	251	1234
1800	37	251	1833
2400	49	840	2462
3600	75	840	3715
4800	101	909	5059
6000	123	909	6136
7200	149	1059	7420
11000*s*	224**	2797**	11194**
13000*s*	268**	2797**	13348**
16000*s*	319**	3055**	15918**
Stormceptor Max	Modular and expandable depending on the site size and water quality objective.		

*Capacity prior to recommend maintenance
**Total both structures combined

Range of drainage areas served by MTD (acres):
Stormceptor STC models can remove 80 % of TSS in an online configuration from less than 1 acre to 20 acres dependent on rainfall data and particle size distribution. The Stormceptor Max is a scalable configuration that can treat 20 to 100 acres of drainage.

Include sizing chart or describe sizing criteria:

Stormceptor sizing is based on continuous simulation of hydrology and Total Suspended Solid (TSS) Settling.

The sizing process is based on the following:

Runoff rates and volumes. Fifteen minute rainfall data is utilized and modeled in the design.

Solids Build up and Wash off: Pollutant load distribution that incorporate "first Flush" measure to correctly distribute pollutant load with flow.

Particle Size Distribution: Particle size and settling velocities are assessed and the settling velocity based on Stokes Law is calculated.

Intended application: on-line or offline: Stormceptor models can be used on-line or off-line.

5. Warranty Information (describe, or provide web address)**:**

LIMITED WARRANTY AND LIABILITY DISCLAIMER*. Seller warrants that the Materials sold under this Agreement meet solely the description and specifications for the same set forth in this Quotation, if any, and shall be free from defects in material and workmanship for a period of one (1) year from the date of delivery thereof. No other express warranties are made with respect to said Materials. Acceptance by Buyer of the Materials shall constitute confirmation by Buyer that the Materials meet the description and specifications, if any, set forth in this Quotation. The foregoing warranty is subject to standard manufacturing and color variations, efflorescence, tolerances and classifications. Seller is not responsible for installation or defective conditions caused by installation. Buyer's exclusive remedy for breach of this warranty shall be to require Seller, at Seller's option, to refund the purchase price for the Materials sold hereunder, to repair or replace any nonconforming Materials. Seller shall not be responsible for any removal or installation costs. THE FOREGOING WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WRITTEN OR ORAL WARRANTIES OR CONTRACTUAL AGREEMENTS, WHETHER EXPRESS OR IMPLIED BY LAW OR OTHERWISE, INCLUDING THE IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR HABITABILITY. Seller warrants that the use or sale of the Materials will not infringe on the claims of any United States patent covering the Materials, but Seller does not warrant against infringement by reason of the use of the Materials in combination with other materials, goods, or manufacturing processes.*

6. Treatment Type

☒ Hydrodynamic Structure
☐ Filtering Structure
☐ Manufactured Bioretention System
Provide Infiltration Rate (in/hr):
☐ Other (describe):

7. Water Quality Treatment Mechanisms (check all that apply)

☒ Sedimentation/settling
☐ Infiltration
☐ Filtration (specify filter media)
☐ Adsorption/cation exchange
☐ Chelating/precipitation
☐ Chemical treatment
☐ Biological uptake
☐ Other (describe):

8. Performance Testing and Certification (check all that apply):

Performance Claim (include removal efficiencies for treated pollutants, flow criteria, drainage area): 75% TSS Removal up to 125% of operating rate

Specific size/Capacity of MTD assessed: Stormceptor 900

Model	*Sediment Capacity (ft^3)	Oil Capacity (US Gal.)	Total (US Gal.)
900	19	251	952

Specific size/Capacity of MTD assessed: STC 900

Has the MTD been "approved" by an established granting agency, e.g. New Jersey Department of Environmental Protection (NJDEP) , Massachusetts STEP Program

☐ **No**
☒ **Yes**; For each approval, indicate (1) the granting agency, (2) use level if awarded (3) the protocol version under which performance testing occurred (if applicable), and (4) the date of award, and attach award letter.
Was an established testing protocol followed?
☐ **No**
☒ **Yes**, (1) Provide name of testing protocol followed, (2) list any protocol deviations: NJCAT

Provide the information below and provide a performance report (attach report):

For lab tests:

i. Summarize the specific settings for each test run (flow rates, run times, loading rates) and performance for each run:

Model ID	
Treatment Chamber Diameter (ID)	6 ft.
Market Waster Quality Peak Flow Treatment Capacity	n/a[2]
100% Operating Rater Tested	0.64 cfs
NJCAT Verification for TSS Removal	75% TSS (up to 125% of operating rate)

[2]Stormceptor is marketed and designed to achieve water quality objectives rather than sizing primarily for flow-based criteria.

ii. If a synthetic sediment product was used, include information about the particle size distribution of the test material: NA

iii. If less than full-scale setup was tested, describe the ratio of that tested to the full-scale MTD: NA

For field tests:

i. Provide the address, average annual rainfall and characterized rainfall pattern, and the average annual number of storms for the field-test location:

Field Tests

TEST AGENCY	Location	Sampling Period	No of Events Sampled	TSS Removal	Land Use
Virginia Transportation Research Council – VDOT and The University of Virginia	UVA Scott Stadium, Charlottesville, VA Automobile Parking Lot under	Nov 1999 to April 200	6	57%*	Parking Lot

	Construction				
Massachusetts Study	Como Park, St Paul, MN	Aug 1998 to Sept 1999	8	76%	Parking Lot
SEA-TAC	Gas Station/Convenience Store Interstate 5 City of SeaTac, WA	March 1999-October 1999	4	65% to 96%	
Massachusetts Field Monitoring	Westwood, MA	July 1997 to Nov. 1997	6	93%	Truck Loading Area Manufacturing Facility

*Sizing based on drainage area and not pollutant load.

ii.

iii. Provide the total contributing drainage area for the test site, percent of impervious area in the drainage area, and percentages of land uses within the drainage area (acres):

iv. Describe pretreatment, bypass conditions, or other special circumstances at the test site:

v. Provide the number of storms monitored and describe the monitored storm events (amount of precipitation, duration, etc.):

vi. Describe whether or not monitoring examined seasonal variation in MTD performance:

vii. If particle size distribution was determined for monitored runoff and/or sediment collected by the MTD, provide this information:

9. MTD History:

How long has this specific model/design been on the market? 1991

List no more than three locations where the assessed model size(s) has/have been installed in Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:
Telegraph Road Project- VDOT Road Project
Arlington National Cemetery, National Park Service

List no more than three locations where the assessed model size(s) has/have been installed outside of Virginia. If applicable, provide permitting authority. If known, provide latitude & longitude:
Montgomery County Maryland STC 900
City of Baltimore Maryland STC 900
Elkridge Maryland STC 900

10. Maintenance: What is the generic inspection and maintenance plan/procedure? (attach necessary documents): See Attached

Is there a maintenance track record/history that can be documented?
☒ No, no track record.
☐ Yes, track record exists; (provide maintenance track record, location, and sizing of three to five MTDs installed in Virginia [preferred] or elsewhere):

Recognizing that maintenance is an integral function of the MTD, provide the following: amount of runoff treated the water quality of the runoff, and what is the expected maintenance frequency for this MTD in Virginia, per year? Maintenance frequency 1 year or more.

Total life expectancy of MTD when properly operated in Virginia and, if relevant, life expectancy of media: NA

For media or amendments functioning based on cation exchange or adsorption, how long will the media last before breakthrough (indicator capacity is nearly reached) occurs? NA

For media or amendments functioning based on cation exchange or adsorption, how has the longevity of the media or amendments been quantified prior to breakthrough (attach necessary performance data or documents)? NA

Is the maintenance procedure and/or are materials/components proprietary?
☒ Yes, proprietary
☐ No, not proprietary

Maintenance complexity (check all that apply):
☐ Confined space training required for maintenance
☒ Liquid pumping and transportation
Specify method:Vactor truck
☒ Solids removal and disposal
Specify method:Vactor truck
Other noteworthy maintenance parameter (describe): NA

11. Comments

Include any additional explanations or comments: NA

12. Certification

Signed by the company president or responsible officer of the organization:

"I certify that all information submitted is to the best of my knowledge and belief true, accurate and complete."

Signature_____

Name: Aimee Connerton

Title: Technical Promotions Engineer

Date: 5/30/2014

NOTE: All information submitted to the department will be made publically accessible to all interested parties. This MTD registration form will be posted on the Virginia Stormwater BMP Clearinghouse website.