



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Watershed Management
Office of the Director
401 E. State Street, P.O. Box 418
Trenton, NJ 08625-0418
Telephone: (609) 984-0058
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JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

October 14, 2008

John MacKinnon
94 Hutchins Drive
Portland, ME 04102-1930

Re: Reinstatement of Conditional Interim Certification
Downstream Defender by Hydro International

Issuance Date: October 14, 2008

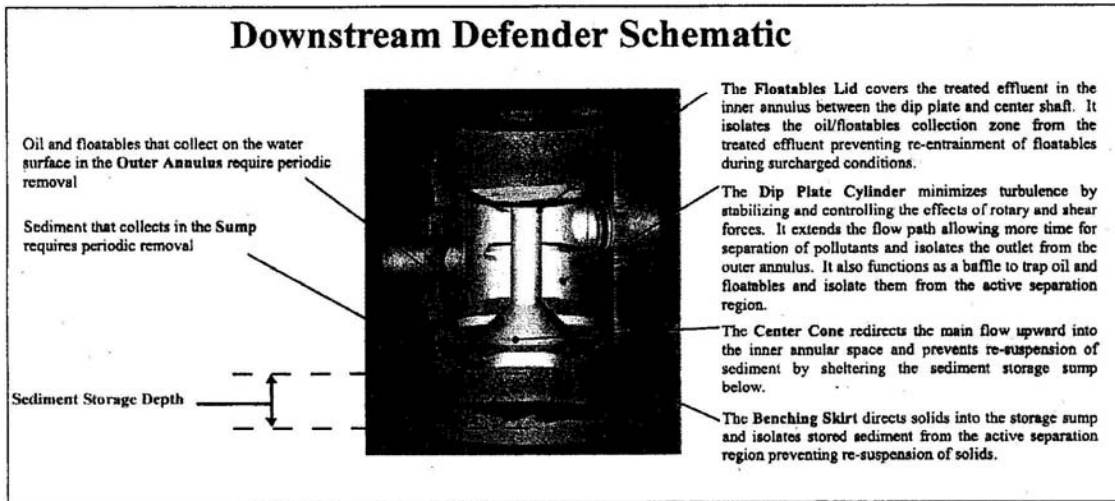
Expiration Date: April 14, 2008

Dear Mr. MacKinnon:

The Stormwater Management rules under N.J.A.C. 7:8-5.5(b) and 5.7(c) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Hydro International has requested reinstatement of the Conditional Interim Certification for the Downstream Defender.

The Downstream Defender is a hydrodynamic separator installed in one manhole as shown in the Downstream Defender Schematic below.

NJCAT's verified claim states that "The Downstream Defender, sized at a hydraulic loading rate of 20gpm/ft³ has been shown to have a 70% solids mass removal efficiency (as per NJDEP treatment efficiency calculation methodology) for F-95 sand with an average influent concentration of 240 mg/l, an average d50 particle size of 120 microns and zero initial sediment loading in laboratory studies using simulated storm water."



The NJDEP certifies the use of the Hydro International Downstream Defender at a TSS removal rate of 50%, subject to the following conditions:

1. The various models and associated water quality flow capacities shall be sized for the peak flow of the New Jersey water quality design storm per N.J.A.C. 7:8-5.5, as shown in Table 1.
2. The Downstream Defender is certified as an off-line system only. Any flow above the New Jersey water quality design storm must be bypassed around the system.
3. A hydrodynamic separator, such as the Downstream Defender, cannot be used in series with another hydrodynamic separator to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.
4. Any request for an extension of this interim certification must include a report of the first quarter's field test results.
5. The maintenance plan for sites using this device shall incorporate, at a minimum, the maintenance requirements for the Downstream Defender shown in Appendix A, enclosed.

Table 1: Downstream Defender System Sizing Parameters and Dimensions	
Diameter in ft	Peak Flow for Water Quality Storm in cfs
4	1.1
6	3.8
8	9.0
10	17.5

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6. This letter reinstates Hydro International Downstream Defender for a period of six (6) months unless a written extension has been issued by the Department. An additional extension of the interim certification will be considered by the Department only after the first quarter's field testing data has been received.

Additional information regarding the implementation of the Stormwater Management rules N.J.A.C. 7:8 are available at www.njstormwater.org.

If you have any questions regarding the above information, please contact Sandra Blick of my office at (609) 633-1441.

Sincerely,



 Lawrence J. Baier
Director

Enclosure

c: Rhea Weinberg Brekke, NJCAT
Tom Micai, NJDEP
Mary Beth Brenner, NJDEP

Appendix A: Maintenance Requirements for Downstream Defender by Hydro International

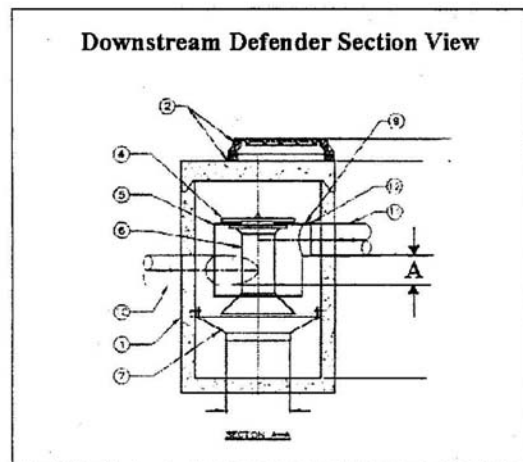
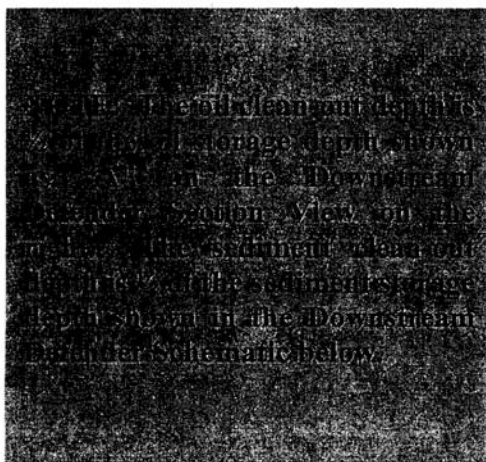
Effective performance of stormwater management best management practices requires regular and proper maintenance. Chapter 8 of the New Jersey Stormwater Best Management Practices Manual and N.J.A.C. 7:8-5.8 of the Stormwater Management rules provides additional information and requirements for preparing a maintenance plan for stormwater management facilities. Specific maintenance requirements for the Downstream Defender manufactured treatment device by Hydro International are presented below. These requirements must be included in the stormwater management system's maintenance plan in order to achieve the TSS removal rate associated with this manufactured treatment device.

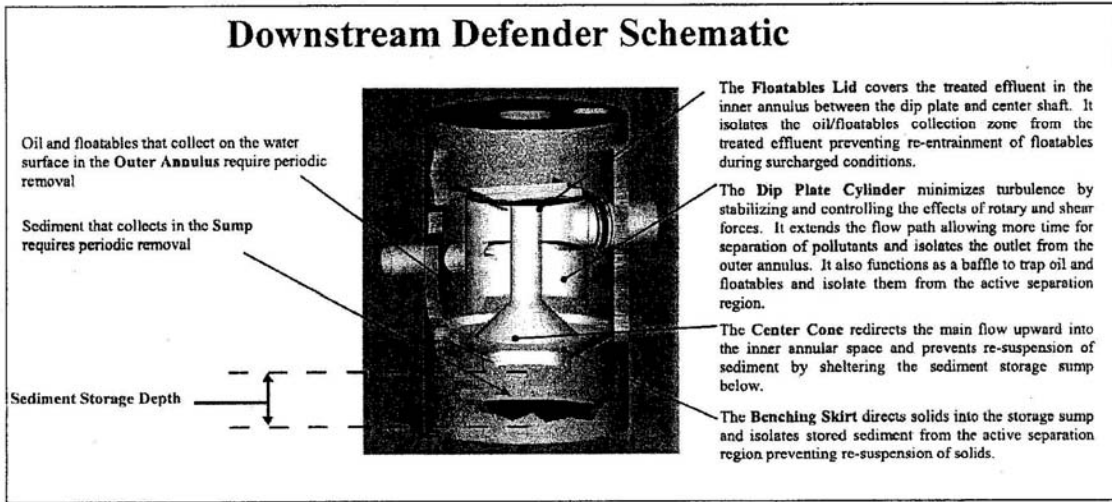
A. General Maintenance

Any and all stormwater management system components expected to receive and/or trap debris and sediment must be inspected for clogging and excessive debris, sediment, and oil accumulation at least four times annually as well as after every storm exceeding 1 inch of rainfall. Such components may include bottoms, trash racks, low flow channels, outlet structures, riprap or gabion aprons, and cleanouts. Disposal of debris, trash, sediment, and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations.

All maintenance plans must indicate the depth at which sediment must be removed for each MTD specified based on the model designation. Removal of sediment and/or oil must take place at or before the following depths based on the model size:

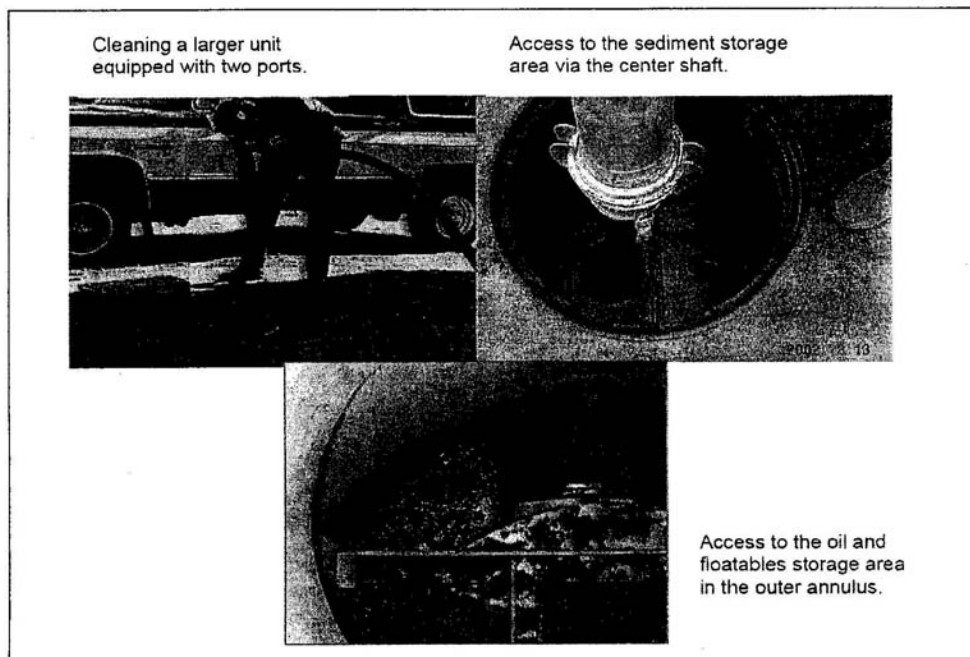
Unit Diameter (ft)	Oil Clean-Out Depth (in)	Sediment Clean-Out Depth (in)
4	6	7.5
6	9	10.5
8	12	12
10	15	15





B. Equipment and Training Requirements

Inspections are performed from the ground surface through access ports are located in the top of the manhole to facilitate inspection and maintenance. (On the 4-foot diameter unit, a single port provides access to both the oil and floatables storage area in the outer annulus and the sediment storage area via the center shaft. On the 6-foot, 8-foot, and 10-foot units, two ports are provided; one port for access to the oil and floatables storage area and a second port for access to the sediment storage area.) Equipment for the inspection (such as probes to measure the depths of oil and sediment) and for the removal of sediment must be specified by the design engineer in the maintenance plan.



C. Structural Components

All structural components must be inspected for cracking, subsidence, spalling, erosion, and deterioration at least annually.

D. Replacement Parts

Certain components of this device are only available through the manufacturer in order to achieve the TSS removal certified by the Department. All of the internal components in the Downstream Defender are only available from Hydro International.



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October 17, 2008

John MacKinnon
94 Hutchins Drive
Portland, ME 04102-1930

Re: Reinstatement of Conditional Interim Certification
Downstream Defender by Hydro International

Issuance Date: October 14, 2008
Expiration Date: April 14, 2009


Dear Mr. MacKinnon:

This is in reference to the conditional interim certification cited above. Due to a typographical error, the expiration date of the original letter was incorrectly listed as **April 14, 2008**. The correct expiration date is **April 14, 2009**, as shown above.

Please note that this letter does not modify any of the conditions listed on the reinstatement document.

Please attach this letter to your copy of the reinstatement of the conditional interim certification. If you have any questions regarding the above information, please contact Sandra Blick of my office at (609) 633-1441.

Sincerely,

 Lawrence J. Baier
Director

Enclosure

c: Rhea Weinberg Brekke, NJCAT
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