Comparison of Hydrodynamic Separators under the NJCAT/NJDEP TARP TIER I Protocol

NJCAT/NJDEP	Vortechnics	**Terre Kleen**	CDS	Downstream Defender	Stormceptor OSR	Bay Separator	AquaSwirl	FloGuard	VortSentry
1 to 1000 µm; (d_{50} 70)	38-75µm	**NJCAT/NJDEP**	1 to 100µm (d_{50} 63)	62 to 300µm (d_{50} 120)	75 to 212µm (d_{50} 100)	3 to 1000µm (d_{50} 85)	50 to 150µm (d_{50} 110)	NJCAT/NJDEP	PSD Not Stated (d_{50} 120)
36% PSD < 38µm	100% >38µm	**36%< 38µm**	<7% < 45µm	100% > 62µm	100%.> 75µm	No Clay used	100% > 50µm	36% <38µm	unknown
100-200-300 mg/L	576-to 65.2mg/L	**NJCAT/NJDEP**	203 to 160 mg/L	289 to 190 mg/L	NJCAT/NJDEP	205mg/L	320mg/L	NJCAT/NJDEP	209mg/L
50% Bed Loading	No	**100% Bed Loading**	No	No	NJCAT/NJDEP	Yes	No	100% Bed Loading	Yes
100% Bed Scour Test	No	**Yes**	No	No	No	Yes	No	Yes	Yes
73-79 degrees F	Not Stated	**Yes**	Not Stated	Not Stated	Yes	Not Stated	Not Stated	50 to 70.1	Not Stated
Method Used	TSS	**SSC (AIC)**	Mass Balance	Mass Balance	SSC (AIC)	SSC	SSC	SSC	SSC
Miscellaneous	Background adjustment allowed		No 125% Flow; Modified Device Tested			1K = 60” 3K = 72” 5K = 96” 10K =144”			
Scale Factor	1.0	1.0	1.0 to 5.7	1 to 2.5	1.0	1.9 to 2.4	1.0	1.0	1 to 3.0
Date Verified	12/2005	2/2010	12/2004	2/2005	8/2007	12/2004	12/2005	8/2007	12/2005
Verified Flow	40gpm/ft² (64%)	**18gpm/ft² (57.8%)**	17.4gpm/ft² (73%)	40gpm/ft² (70%)	22gpm/ft² (69%)	25gpm/ft² (51%)	49gpm/ft²	22gpm/ft² (60%)	39gpm/ft² (69%)
Adj to NJDEP Protocol		**NONE**						NONE	