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Summary of Test Results
from the
Onsite Wastewater Technology Testing Report
Massachusetts Alternative Septic System Test Center

FINAL
Onsite Wastewater Technology Testing Report
Massachusetts Alternative Septic System Test Center
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-- March 2008 --
Eljen™ Geotextile Sand Filter
Demand Dosed Mode
Technology Vendor
Eljen Corporation
125 McKee Street
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About the Test Center

The Massachusetts alternative Septic System Test center (MASSTC) is located at the Otis Air National Guard military base in Falmouth, Massachusetts. The Test Center, also known as the Buzzards Bay Test Facility, is operated by the Barnstable County department of Health and Environment under direction of a Steering Committee with members from the Massachusetts Department of Environmental Protection, the United States Environmental Protection Agency, Barnstable County, Massachusetts Coastal Zone Management and the University of Massachusetts School of Marine Science and technology.

The mission of MASSTC is to provide a location for the verification and testing of onsite wastewater treatment technologies and components. The facility conducts testing under various protocols, some of which are widely recognized. Of note, the National Sanitation Foundation International (NSF) has employed MASSTC to conduct its standard protocol NSF-40 on a number of onsite septic system technologies. In addition, a number of verification tests were performed in accordance with a nutrient testing protocol jointly developed with industry, NSF and USEPA known as the Environmental Technology Verification Program (ETV). Finally, MASSTC has been used to conduct the more recently developed nitrogen reduction standard NSF/ANSI 245.

The following charts summarize 32 weeks of testing in the Demand Dose and Time Pressure Dosed Modes with values for Biochemical Oxygen demand (BOD), Total Suspended Solids (TSS), and Fecal Coliform reduction in Log format.

Demand Dosed Mode												
	Eljen GSF/A42 Modules						Influent					
	CBOD (mg/l)	TSS (mg/l)	Discharge Temperature °C	Sp Cond(uS)	Dissolved Oxygen (mg/l)	pH	CBOD ₅	TSS (mg/l)	Discharge Temperature °C	Sp Cond(uS)	Dissolved Oxygen (mg/l)	pH
Mean	2.0	2.7	N/A	426.0	7.31	N/A	198	189	N/A	489	0.27	N/A
Median	1.0	2.5	N/A	428.0	6.96	N/A	180	180	N/A	499	0.16	N/A
Min Value	1.0	2.5	6.1	195.0	4.50	4.24	80	45	9.8	260	0.04	6.67
Max Value	7.2	7.0	23.3	625.0	11.12	7.44	920	480	22.7	890	1.38	7.56
Count	124	124	124	124	124	124	124	124	124	124	124	124

Time Pressure Dosed Mode												
	Eljen GSF/A42 Modules						Influent					
	CBOD (mg/l)	TSS (mg/l)	Discharge Temperature °C	Sp Cond(uS)	Dissolved Oxygen (mg/l)	pH	CBOD ₅	TSS (mg/l)	Discharge Temperature °C	Sp Cond(uS)	Dissolved Oxygen (mg/l)	pH
Mean	2.6	2.7	N/A	460.1	6.3	6.35	201	193	N/A	503	0.23	7.17
Median	2.2	2.5	N/A	450.0	5.9	6.32	180	190	N/A	505	0.15	7.21
Min Value	1.0	2.5	5.6	294.0	4.2	5.29	89	50	9.9	312	0.04	6.67
Max Value	14.0	9.0	24.5	930.0	8.9	7.74	920	480	22.7	890	1.30	7.56
Count	122	122	122	122	122	122	122	122	122	122	122	122

Fecal Coliform Reductions			
	Minimum Log Reduction	Maximum Log Reduction	Mean Log Reduction (Log ₁₀)
Demand Dosed	1.9 (98.415%)	4.8 (99.999%)	3.1 (99.92%)
Time Pressure Dosed	1.8 (98.740%)	5.1 (99.998%)	3.1 (99.92%)