

AMPHIDROME® FACILITY REPORT

Plant & Location: Nursing Home, Pleasant Bay Nursing Home, Brewster, MA

Massachusetts DEP Permit Number: 724-0

Facility type: Nursing Home.

Chemical Feeds: Carbon & alkalinity

Summary: This plant was designed to meet groundwater discharge limits including a total nitrogen limit of ≤ 10 mg/L. Design and average values are provided below.

Parameter	Design Values	Actual Values
Flow	26,500 gpd	12,200 gpd
BOD ₅	450 mg/L	430.7 mg/L
TKN	70 mg/L	40.9 mg/L
C/N	6.4	10.5

C/N - Carbon-to-nitrogen ratio measured as BOD₅/TKN.

Summary: The quality of the effluent from this facility has consistently stayed below permit since it's the start of operation in 2007. The average effluent results for the life of the system (January, 2008 through June, 2011) are shown in the table below.

	BOD ₅	TSS	Total N
Permit Limit	<i>30 mg/L</i>	<i>30 mg/L</i>	<i>10 mg/L</i>
Average	5.5 mg/L	6.6 mg/L	5.1 mg/L

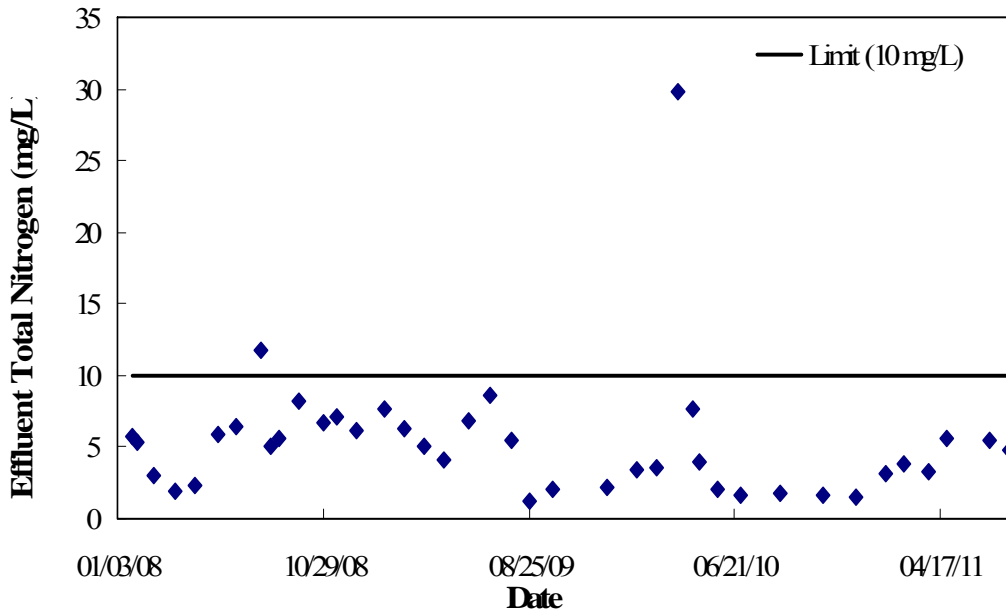


Figure 1. Influent and Effluent Total Nitrogen versus Time

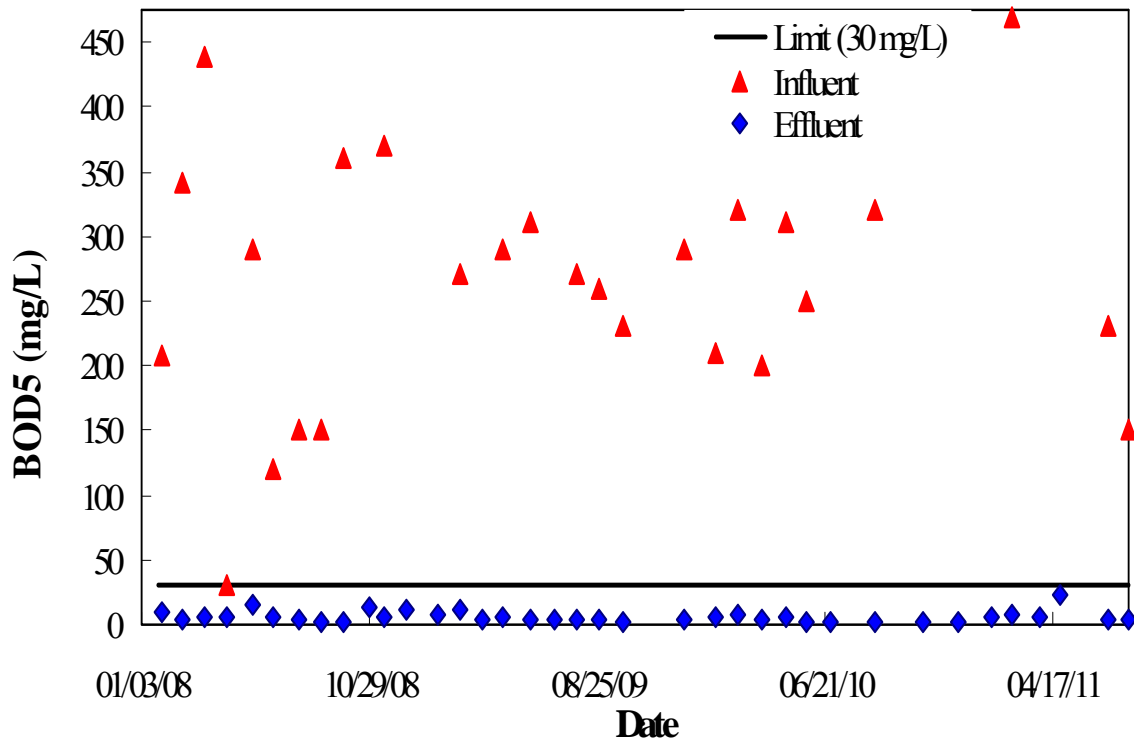


Figure 2. Influent and Effluent BOD₅ versus Time