

**Controlled Environment Horticulture, Inc.**  
**2639 Big Sewickley Creek Rd., Sewickley, Pa. 15143**

Date: March 23, 2011

To: David Del Porto, President  
Ecological Engineering Group, Inc.  
PO Box 415  
Weston, MA 02493.

Re: Vacuum toilet and Carousel system

Dear Mr. Del Porto

I am writing to provide you with an update on the performance of the Carousel with Dometic Vacuflush system installed at our greenhouse in the spring of 2008. The system components were (1) Carousel 80-A large reactor and (4) Vacuflush 4848-12 rear discharge toilets. A ventilation fan was installed to operate continuously within a 20ø vent pipe. Two of the toilets are located within 10ø of the Carousel and discharge directly into the reactor. Two of the toilets are located 400ø from the reactor and empty into a separate pump and piping system for discharge into the reactor.

The average user rate is approximately 10 people/day during normal working hours seven days/week. We assumed during design that we would rotate the reactor every 6 months but after almost three years we have not filled the first chamber. Our assumption is that the wastes are being macerated by the Vacuflush system and are therefore rapidly degrading. The small amount of liquid discharges into an existing holding tank that previously served as the main disposal method. This holding tank with a capacity of 3500 gallons had required pumping every two months at a cost of \$500/service. We are therefore saving almost \$3000/year and will have system payback this year.

Maintenance of the system is provided by in house personnel with support from you and the distributor of the Vacuflush. Aside from regular maintenance we have experienced no significant problems and following a brief learning curve for users we are now operating smoothly. The learning curve included changes to the toilet paper used, the cleaning of the toilets and a general õgetting used to õ the appearance and function of the toilets. The users have no contact with the reactor. We have experienced no odor problems.

Overall the system has performed beyond our expectations. Please do not hesitate to give my phone number (412) 310-3755 to others if helpful.

Sincerely,

George Jones  
Executive Director, CEH Inc.