



December 9, 1997

**Clearwater Enviro Technologies, Inc.**  
1054 Kapp Drive  
Clearwater, FL 33765

RE: Field and lab testing of *Scale Blaster Model 50* electronic conditioning unit

#### LAB TEST

The objective of the Hardness Tests is to determine if the *Scale Blaster* decreases the soap usage, based on the tincture of green soap test.

Initial hardness was 27 grains per gallon or 460 ppm as  $\text{CaCO}_3$ . Water was simultaneously passed through two pipes, one with the *Scale Blaster* wrapped on a 3/4" PVC pipe, and the control line the same but without *Scale Blaster*. The amount of soap necessary was reduced 15%. The untreated 150 mL sample required 32 drops of tincture of green soap, while the treated water required 27 drops to produce equal amounts of suds.

#### FIELD TEST

The objective was to see if the *Scale Blaster* improved the quality of water at my home.

A 25% decrease in soap usage was measured using the same soap titration method. In addition, I've seen some qualitative improvements in hardness scaling and precipitation. The film that has been on my glass shower doors has qualitatively changed, and now can be removed just by wiping it away. The water has a different feel than before, especially during the use of hair conditioners. My daughters noticed this without even knowing that we had installed the *Scale Blaster*. In addition, the scale around faucets and in corners of the tub and shower has become much softer.

#### OTHER NOTES

The units are extremely easy to install, and require no extra floor space. There is no noise, and no maintenance is required (i.e., no addition of chemicals).

I am very interested in continuing to study the effects of the *Scale Blaster* on the formation of solids in suspension rather than as a scale. If the product continues to function as reported above, there may be many possible applications.

Sincerely,

Brian A. Dempsey  
Associate Professor of Environmental Engineering