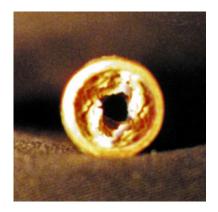
# **ACTUAL PHOTOGRAPHS**

Taken by Centre Analytical Laboratories

# BEFORE TREATMENT



November 5, 1997 1/2" Copper Pipe full of scale deposits

## AFTER TREATMENT



December 7, 1997 Same pipe completely descaled



# Centre Analytical Laboratories, Inc.

Clear Water Technologies 1054 Kapp Drive Clearwater, FL 34625

Soap Test comparing un-treated water vs. water treated with Scale Buster SB 50 unit.

	Volume Of Water	Volume of Soap Reagent	Soap Suds Formed(Y/N)
	(ml)	(ul)	
Untreated	100	50	N
Treated	100	50	N
Untreated	100	100	N
Treated	100	100	N
Untreated	100	150	N
Treated	100	150	N
Untreated	100	200	N
Treated	100	200	N,Small bubbles that breakup
Untreated	100	250	N
Treated	100	250	Y,Thin layer of suds formed
Untreated	100	300	Y,Thin layer of suds that break up after 3 minutes
Treated	100	300	Y,Suds layer twice as thick that does not breakup

Test Date: Analyst: 23-Oct-97 GHD

Soap Reagent:

Lamotts Soap Reagent #4

Submitted by

Centre Analytical Labs, Inc.

Reviewed and Approved\_by:

Kevin J. Lloyd Laboratory Supervisor

## Centre Analytical Laboratories, Inc.

Clear Water Enviro Technologies 1054 Kapp Drive Clearwater, FL 34625

24-Oct-97

Dear Sir or Madam.

Upon extensive lab and field testing of the SB 50 Scale Blaster unit the following results were observed.

In direct home applications, a noticeable difference in the "feel" of the water was observed as a "softer", 
"silkier", less dry feeling on the skin and hair with the use of much less soap and shampoo. Laundry 
required less detergent and seemed less "stiff" after washing than before the installation of the unit. Soap 
scum and curd in the tub and showers was greatly reduced as was mold and mildew. The existing white 
hard water scale lime build-up on shower heads and fixtures loosened and was easily removed without 
chemical cleaners and did not return. Water flow seemed to increase as the unit apparently "de-scaled" the 
inside of the plumbing pipes. These changes were noticed immediately to a minimum extent, and became 
more pronounced after 30 to 90 days after installation.

The units installed easily with no plumbing required. The units required no maintenance after installation. No salt or chemicals were necessary for operation, making this unit considerably more economical to install, operate and healthier than conventional water softner systems.

All field test units were installed on water containing between 15 and 25 grains (257 ppm to 428 ppm) of hardness as CaCO3 and were easily installed by lab technicians per the enclosed instructions.

Laboratory testing resulted in a pronounced reduction in the amount of soap necessary to generate equal amounts of soap suds between hard, untreated where and water treated by the SB 50 unit. Typical reduction was about 22% less soap necessary to produce suds in a 150 ML sample at 20 grains of hardness (342 ppm) with a range of 17% to a high of 30% reduction. The SB 50 unit as lab tested was applied to ½ inch PVC pipe while the field testing was installed on ½ copper plumbing.

It is our conclusion that the SB 50 unit performs as claimed by your company.

Sincerely.

Kevin J. Lloyd Laboratory Supervisor 12/10/97

Clearwater Enviro Technologies 1054 Kapp Dr Clearwater FL 34628

#### Dear Sir or Madam

Following our initial report, a test was conducted on a 1/2 inch copper pipe filled with severe calcium deposits, (see analysis for weight and detailed analysis). After running hard water of approximately 20 grains per gallon treated only with the Scale Blaster SB-50 unit for a period of 30 days, the calcium deposits were removed from the inside of the pipe. This is explained by the fact that the hardness that was initially in calcite molecular from was converted by the SB 50 to an Aragonite form and released the H<sub>2</sub>O molecule, freeing it to redesolve the calcite hardness build-up in the pipe. After the descaling process is complete, the new form of calcium (aragonite) does not precipitate out in the form of hard scale, but rather a white-gray powder like dust that is easily removed without the aid of chemical solvents and does not react with soap the way a calcite molecule does in terms of forming soap curd and scum.. These changes were easily visible under an electron microscope. This significant change is what is responsible for the performance of the SB 50 unit. Please find enclosed the test data and photos applicable to our lab testing.

Sincerely

Kevin J. Lloyd Laboratory Supervisor

### COMMONWEALTH OF PENNSYLVANIA

## DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF MANAGEMENT AND TECHNICAL SERVICES

BUREAU OF LABORATORIES

Certifies that

CENTRE ANALYTICAL LABORATORIES INC 3048 RESEARCH DRIVE STATE COLLEGE PA 16801 14.347

having duly met the requirements of Chapter 109, Subchapter H, Safe Drinking Water Rules and Regulations issued under the Pennsylvania Safe Drinking Water Act of May 1, 1984 (P.L. 206, No. 43), (35 P.S. SS 721.1 - 721.17) is hereby approved as

Certified Drinking Water Laboratory

to perform the following analyses:

Microbiology

Inorganic
Trace Metals (Groups 1-3), Nitrate/Nitrite, Fluoride, Cyanide, Corrosivity, Sulfate

Organic

Total Trihalomethanes, Volatile Organic Compounds (Groups 1-3), Herbicides (Groups 1,2,4,5,6), Pesticides (Groups 2-4), PCB, Synthetic Organic
Chemicals (Groups 1-3)

Expiration Date: March 29, 1998

Certificate not transferable Surrender upon revocation To Be Conspicuously Displayed at the Laboratory

Floyd Kefford, Bureau Director