



MEMORANDUM

Date: 01/09/07
To: File
From: Neville Blair
CC:

Subject: *San Antonio Housing Authority – Report
Woodhill Apts. – 4909 Woodstone – Installation of ScaleWatcher water treatment system*

1/9/07 – Site meeting at Building #27 boiler room with four 100 gal boilers – Zachary Shipley, Marcello Perez, Daniel Parsons, Mario radio #221, Jimmy Carter a licensed plumber & representative of ScaleWatcher (830) 832-0010, Neville Blair
Purpose of meeting was to discuss the installation of a ScaleWatcher unit in Building # 27 on a 120 day trial basis (2/21/07 to 6/21/07). If the unit did not work ScaleWatcher would remove it and there would be no charge. If the unit worked SAHA would purchase the unit (needed to add an additional loop to the system). The terms were agreed to.

The manufacturer of ScaleWatcher www.scalewatcher.com claims _____ that the device will prevent the calcium or “scale” (calcium build up inside of the pipes, restricting the flow of water) to build up in the inside of the copper pipes and at the bottom of the domestic hot water boilers, resulting in premature failure of the pipes and the boilers. The device consists of a coils wrapped around the incoming cold water line and the hot water line returning to the boiler and a control panel that requires a 110 v outlet. Under normal circumstances, no plumbing work is required. The devise does not remove the scale from the water, it changes the “charge” on the scale particles and prevents the particles from sticking to the inside walls of the copper pipes. The calcium/scale remains in the water and passed through the system. An additional benefit, claimed by the manufacturer, is that soap will lather up when taking a shower. Because there are no consumables, salt or potassium as required by other water treatment systems, there is no salt to be discharged into the environment.

It must be noted that Woodhill was chosen as the BETA site because, in spite of attempts at water treatment, it has a consistent history of domestic hot water boiler failure due to scaling. At this site a 100 gallon boiler typically has a limited life span. There are four boilers in this boiler room. The ScaleWatcher device will protect all four boilers.

The cost of replacing one boiler is:

\$2,350.00 water heater
\$ 840.00 labor for three mechanics to remove and install a water heater
\$ 400.00 miscellaneous materials needed to complete an installation (copper pipe, valves).
\$3,590.00

2/21/07 – Site meeting at Building #27 boiler room – Zachary Shipley, Marcello Perez, Daniel Parsons, Mario, Jimmy Carter from ScaleWatcher
A ScaleWatcher unit was installed on the pipes in the boiler room. One of the boilers was installed the week before. For the purpose of the test, this new boiler would be our “control” boiler to observe in the coming months.



ScaleWatcher unit



ScaleWatcher coil

4/26/07 – 64 days since Scalewatcher installation - Site meeting at Building #27 boiler room – Zachary Shipley, Marcello Perez, Daniel Parsons, Mario, Jimmy Carter from ScaleWatcher

By the time I got to the site Marcello & Daniel had removed a section of copper pipe and the inspection plate to two of the boilers, in order to examine their condition. They both said that they were impressed with the condition of the pipe and there was no scale at the bottom of the boiler installed on 2/21/07.

5/7/07 – Marcello said that there are problems in the boiler rooms at Woodhill II. I asked Jimmy Carter to meet Marcello at the site 9:00am on 5/9/07 and give us a proposal to install a unit in the boiler room.

5/9/07 – Site meeting with Marcello, Jimmy Carter

Jimmy Carter inspected all of the boiler rooms in Woodhill Phase I & II. He will be submitting proposals for all of the rooms.

5/14/07 – Receives proposals for:

- Bldg #27 boiler room Phase I – four 100 gal boilers for IE 2 descaler
- Bldg. #1 boiler room Phase I – three 100 gal boilers for IE 2 descaler
- Bldg. #10 boiler room Phase II – six 100 gal boilers for IE 4 descaler
- Bldg. #15 boiler room Phase II – four 100 gal boilers for IE 2 descaler

7/13/07 - Friday, 7/13/07, was 180 days since the installation of the new boiler and 142 days since the installation of the Scalewatcher unit. Site meeting at Building #27 boiler room – Zachary Shipley (invited did not attend), Dan Paxton, Marcello Perez, Marvin Williams, Jimmy Carter from ScaleWatcher. In order to inspect the bottom of the heater tank, we valved off and drained down the heater that was installed 1/9/07. There was white “sand” like deposits on the bottom of the tank and the copper coils were clean. When I asked if the “sand” was scale, Dan and Marcello said that it was mineral deposits. However, they explained that, as the Scalewatcher unit de-scales it creates “sand” from the scale that travels back through the system and deposits itself on the bottom of the tanks. The difference is that, in the past, “scale” would form a hard crust on the copper coils and the bottom of the tank. What we observed was the “sand” deposited on the bottom of the tank and clean copper coils. Dan and Marcello said that these heaters would have to be put on the Preventative Maintenance list to backwash the “sand” on a regular basis. Based on their experience and their inspection, both Marcello and Dan **agreed that the new boiler installed on 1/9/07 would almost be at the end of its useful life if the Scalewatcher unit was not installed.** They also mentioned that, in their opinion, the liquid water treatment that they have been using, at approximately \$200.00 per month, has been ineffective and sometimes we paid for service and supplies that were not delivered.

I am approving payment of invoice #566899 for the ScaleWatcher system. _____

6/27/08 – Boilers in Room #27 are still in service and no calcium deposits on boiler internal copper parts.
Calcium “powder” needs to be backwashed as a maintenance item.

WOODHILL APARTMENTS



Installed 11/01/06 – room # 1
Failed 02/04/08



Warehouse 03/06/08
Failed hot water heaters due to scaling



Installed 11/01/06 – room #1
out of service 02/04/08



Installed 02/21/07 – room #27
still in service



Installed 2/21/07 – room #27
still in service